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Education Inequality in the United States: A Wicked Problem With a Wicked Solution

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Abstract

A problem wicked in its complexity and detriment; the United States has failed most of its students in its inability to address the unashamedly rampant inequality throughout its public education system. The inequality in American public schools appears evident and boundless, but the causes of that inequality, and especially its solutions, are not as obvious. It is easy to explain away the system's failures as a product of the United States' ultra-varied environment, but further investigation reveals much of the systems problems are self-caused, resulting from the United States' uniquely local approach to supporting its schools. A misguided fear of education investment and reform has led the country to rely on localized funding, with minimal redistribution among districts and states. While state and federal governments have taken a hands off approach on funding, anxieties about how those funds are used have left schools accountable to governments out of touch with the schools and communities they control. Rather than give schools and teachers the autonomy they need to counteract unequal circumstances, teachers in high-need schools find themselves limited by the government, the resources available to them, and the communities they find themselves teaching in. A school in a high-needs district or state is typically suffering from not just one problem, but a proliferating collective. Schools that need the most help, are typically getting the least. It is an education system of many components strung together to be to the benefit of some, and the detriment of most.

No government reform has taken a big step forward in addressing the inequality of school quality, but recent increased transparency has granted education researchers a collection of school funding data finally extensive enough to reveal solutions. Relying on that data, and an understanding of American education inequality built over the first two sections, feasible reforms to the system arise as they never had before: An equitable system for funding, found in Wyoming, that presents itself as a viable model to be applied nationwide. The state and federal government are shown to be able to fund education as it requires to be funded, reversing the current trend of underfunding. Teachers remain a big part of the solution: much of the problems that plague United States education can be addressed by preparing teachers better, giving them more autonomy, and paying them more. Finally, through expanding Head Start, the country builds the strong foundation its most vulnerable children need. In solving a complicated problem, what results is a complicated, yet profitable investment in America's children, exhaustively demonstrated to be affordable and possible. In reforming education inequality, the country ensures a collective greatness for generations to come.

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Acknowledgements

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Introduction

The tools to succeed have been kept from prospective pediatricians, governors, artists, veterinarians, doctors, ballet dancers, astronauts, obstetricians, nurses, designers, architects, presidents, captains, police, actors, musicians and teachers (Common, 2005). Children who achieve their dreams in the strikingly broken United States school system are not the norm, but the lucky few. In not only underfunding their education system, but allowing a rampant level of inequality to flourish throughout its schools, the country has set up its future taxpayers, voters, and Samaritans for failure. As things currently stand, the United States has all but given up on their future. For the last half-century there has been a diverse breadth of literature detailing the shortcomings of the United States education system, and especially inequality within schools. But, without much information on how the thousands of local districts support their schools, not to mention a state and federal system shrouded in complexity, finding the causes remained a lot harder of an effort then spotting the problems. Only in the past few years have education researchers interested in the inequalities of school funding had access to exhaustive data on how the United States funds their schools (2018, p. 106). That data has not only allowed researchers to make increasingly precise observations about inequality in United States schools, but, just as importantly, for the first time the data is comprehensive enough to show that equitable education is possible within the United States. Since the data is so new, it has not yet undergone a great deal of academic interpretation. The recency of the data allows this paper to break new ground on United States education funding. The data presents an opportunity to find solutions that no one had thought existed until, approaching the problem of education inequality from a new angle.

Working with the data and a developed understanding of education inequality in America, this thesis is an attempt to resolve what University of Washington Education College professor Marguerite Roza calls a "wicked problem" (p. 96). The current education system consists of many components strung together, making it less of a harmonized system and more of a brute force solution to publicly supporting child education. It cannot be addressed as just one system, but as the sum of many pieces all doing different things. That's what makes education inequality wickedly hard to solve. Understanding that, equality in United States education will require many facets of the system to be reformed at the same time; a complicated and vast system of moving parts coordinated and aligned to fix the wicked problem (p. 96). In presenting a comprehensive approach, the reforms proposed in this thesis depend on each other. Policy makers cannot simply cherry pick solutions from among these pages, doing so will not bring the United States closer to addressing education inequality. With that said, the solutions proposed from this data are not conclusively complete. Not every necessary detail can be figured out in this thesis. What this paper hopes to do is show that an equal, and effective, education system is viable within America—as it offers a detailed, but initial sketch along those lines.

This sketch, as much as it will need to be refined, remains a pivotal step towards addressing inequality because increasingly in the US, few seem to believe such a reform is even possible. For some time now, most policy makers seem to have given up. The ideas presented here seek to push leaders away from complacency and even hopelessness. In that, this thesis hopes to kindle a much needed dialogue about confronting the United States' wicked problem: the inequality in its school system. While this paper is not

definitive, it hopes to offer policy makers the solid starting off point that just did not seem to exist yet, built in great gratitude of the most recent breakthrough research. This is a diagnosis, illuminating what a policy maker would need to understand about the current system and the necessary changes they might begin to make in starting to overhaul a system succeeding some, but failing most.

The paper does this in three different parts, each part playing an important role in working towards a solution wicked in its necessary complexity. That begins in part 1 of the paper by identifying the smaller problems that compose the widespread inequality. The paper must first identify and explore the problems that exist before it can understand and address them. This includes detailing the different types of inequality that have arisen and showing where they have manifested. In part 2, the paper builds a comprehension of United States' education inequality by unraveling its causes. There are many layers to education inequality, and this paper must strive to comprehend every one of them in order to address every inequality they create. Some of these different types of inequality are rooted in a single cause, but much of it is rooted in a culmination of causes. Part 2 hopes to leave readers with an exhaustive idea of where current government education policy goes wrong, and why it goes wrong. Having illustrated the problem, and its causes, part 3 takes on the all-important step of using a developed in-depth understanding of education inequality to viably address it. It presents a series of proposals that work together to take on education inequality, justifying each proposal with in-depth explanations for their viability and effectiveness. An exhaustive series of education funding reforms support the effectiveness of each other, which in turn provide the necessary resources and systemic changes to make teachers more effective, which is then

further supported in a strong foundation for learning through Head Start expansion. Each proposal builds upon one another to form a plan strong enough to begin solving the wickedly complicated problem of education inequality.

While the thesis attempts to bring as much depth and finality to the proposals as possible, it can only hope to flesh them out enough to prove their viability, and their potential for addressing inequitable education. In that, this paper hopes to build upon all the recent research that has helped illustrate the problem more clearly than has ever been done. General ideas about how these problems could be fixed certainly arise in recently published work, but nothing that seems to actually tackle what standards to set or specifics about where the money is going to come from to pay for all these reforms among other gaping holes. In proposing solutions, researchers all seem to hit these same walls. Perhaps because almost all the research this paper relies on has been written in the last two years, and a lack of solutions is representative of the limitations funding experts have past endured in working out the problem. In its research, this paper had trouble finding any extensive education reform proposals that really dove in to addressing education inequality. Elizabeth Warren's 2020 presidential campaign featured the most comprehensive plan out there, and even that was vague in detail and did little to break down costs beyond just initial bulk estimates (Warren, 2019a). Like a great many political and academic proposals, current proposed education reforms seem to put more detail in scolding the current broken system, and less detail into pragmatic and extensive proposals focused on what future fixes will require and do.

That is not a critique of Warren, but more a testament to how far dialogue on education reform has to come before proposals evolve from a collection of unconnected

far-fetched ideas to enter the political sphere as much-needed thought-out comprehensive reforms. This paper, in its conclusions, attempts to avoid falling into the ease of criticizing an already failed system. Instead, it seeks to push current dialogue to a place that's sees the potential for collective reform. This papers proposals, when taken as a whole, aim to illustrate a viable and effective alternative to a current system damaging to the country's future in its current inequality. What follows is how, through possible means, America can learn from its failures to create the most valuable asset a country could have: a common greatness in its people for generations to come.

Part 1: The Widespread Inequality

I. Ineffective Schools

In order to best identify where unequal opportunities for quality schooling lie, it is important to be clear about what makes a school ineffective or effective. Michael Rutter, commonly referred to as the "father of child psychology" (Pearce, 2005), carried out a series of studies to determine what makes a school effective. He found that "effective schools are those that promote academic achievement, social skills, polite and attentive behavior, positive attitudes toward learning, low absenteeism, continuation of education beyond the age at which attendance is mandatory, and acquisition of skills that enable students to find and hold a job" (Shaffer & Kipp, 2013, p. 577). Rutter asserts that ineffective schools fail to accomplish these objectives, regardless of the students' racial, ethnic, or socioeconomic backgrounds (Shaffer & Kipp, 2013, p. 577). The following sections will feature an overview of the state of public schooling in the United States with the intention of proving not only why America has failed to provide effective public schooling for most of its minority and low-income students, but also explaining why such an inequality has arisen. We have to identify and assess problems before we can solve them.

II. The Widespread Inequality: A Descent

Public schools in the United States have long been viewed as institutions existing to serve their local communities. In the nation's early days, schools were largely funded by voluntary contributions (Biddle & Berliner, 2002). Schools were not seen as part of a national public system, but rather as a necessity to the community. It was not until the

early 19th century that education became of national interest. Public education came to be seen as a solution: the nation's solution to a problematic lack of fruitful assimilation in a growing population full of immigrants. America was a mixing pot of languages and education levels, and education reformers like Horace Mann, who became the secretary of the newly formed Massachusetts Board of Education in 1837, believed that public schooling was necessary for the creation of a national identity (Semuels, 2016). He called education "the great equalizer of the conditions of men" (Semuels, 2016). Mann would go on to create the Board of Education in 1837. Through his efforts, the nation doubled state expenditures on education. His home state of Massachusetts would then, 15 years later, pass the first law requiring parents to send their children to a public school for at least 12 weeks. Public education did not just simply come to exist, it took a powerful national effort. According to Michael Rebell, executive director of the Campaign for Educational Equity at Columbia University Teachers College, the push for education as a right was the "most explosive political issue in the 19th century, except for abolition" (Semuels, 2016).

Education would stay mostly a local and state matter, not a federal one, until at least the 20th century (Semuels, 2016). Pressuring states directly, pro-education reformers were able to push through public education requirements in states constitutions. The language of education clauses, remaining unchanged from public educations onset, vary greatly. Connecticut's constitution, for example, says merely that "there shall always be free public elementary and secondary schools in the state" (Semuels, 2016), while Illinois's constitution requires an "efficient system of high-quality public educational institutions and services" (Semuels, 2016). States left much of the funding of schools up

to cities and towns. Most communities had been funding education through voluntary local means, so it was only natural that at the end of the 19th century a more structured approach to education arose in local property taxes (Biddle & Berliner, 2002). Local property taxes kept funding within the community, but provide a more dependable way to secure funding. In 1890, property taxes accounted for 67.9 percent (Walker, 1984) of public-education revenues in the United States (Semuels, 2016). Since most communities at the time were relatively isolated with similar standards of living, there were real advantages to such a system (Biddle & Berliner, 2002). No community had to rely on another for funding, and most communities were able to ensure a steady source of funding through just local means. Such policy made the States one of the most egalitarian places on the planet—for white people, at least (Semuels, 2016). In today's United States, that is certainly not the case.

States got a glimpse of the inequality that was to come in the early part of the 20th century. Sensing the beginnings of a problematic divide, states tried to step in and provide grants to districts so that school funding was equitable, according to Allan Odden, a professor specializing in school finance at the University of Wisconsin (Semuels, 2016). But then wealthier districts would spend even more, buoyed by increasing property values, marginalizing state subsidies ability to make education equitable as they once had (Semuels, 2016).

As Americans began to move about and sort themselves in the decades after World War II, a system supported by local property-taxes no longer remained equitable (Semuels, 2016). Stimulated by property-tax supported schools, among other things, many people moved to the suburbs that came to surround urban centers. Those that

moved would find a property-tax supported system meant their success, and the success of those around them, ensured a well-funded school. Thinking of their children, these parents were generally willing to fund well-equipped, well-staffed public schools. At the same time, they left those in city-centers and rural towns behind. Encouraged by a local property-tax system the successful bolstered their own communities and attracted others seeking to benefit from one another's success, while the less successful found their struggle getting steeper and steeper (Biddle & Berliner, 2002). As America urbanized and industrialized, experiencing more regional inequality, so too did the schools. Areas that had poorer families or less valuable land had less money for schools (Semuels, 2016).

This inequality was both racial and economic. Across the country, white families moved out of the cities into the suburbs and entered school systems there, while black families were stuck in the cities where property values plummeted and schools lacked basic resources (Semuels, 2016). As *the Atlantic* staff-writer Alana Semuels describes: "in some states, where school districts were run on the county level, costs could be shared between rich and poor districts by combining and integrating them, especially after *Brown v. Board of Education*. But in states like Connecticut, with deeper histories of public schooling, there were hundreds of separate districts, and it was much more difficult to combine them or to equalize funding across them."

From there inequality within the United States public school system has only gotten much worse. What follows is a comprehensive breakdown of the current state of inequality in the United States public school systems.

III. The Widespread Inequality: Among Race and Ethnicity

America's public school system is currently overrun with segregation. In 1998 Stanford Graduate School of Education professor Linda Darling-Hammond found "two-thirds of minority students still attend schools that are predominantly minority, most of them located in central cities and funded well below those in neighboring suburban districts" (1998). Looking specifically at Alabama, New Jersey, New York, Louisiana and Texas, she also found "that on every tangible measure—from qualified teachers to curriculum offerings—schools serving greater numbers of students of color had significantly fewer resources than schools serving mostly white students" (1998). Education's inequality along racial lines feeds societies segregation. As demonstrated in a 2006 paper by economist David Bjerk, "racial differences in premarket academic skills appear to fully account for the current levels of wage inequality between black and white males in the white-collar job sector" (p. 398). As Bjerk has found, "in general, the evidence strongly suggests that educational discrepancies between whites and blacks have been an extremely important source of the observed racial wage in- equality throughout U.S. history to the present day" (p. 398). Beginning to address societal racial inequality starts with addressing educational inequality.

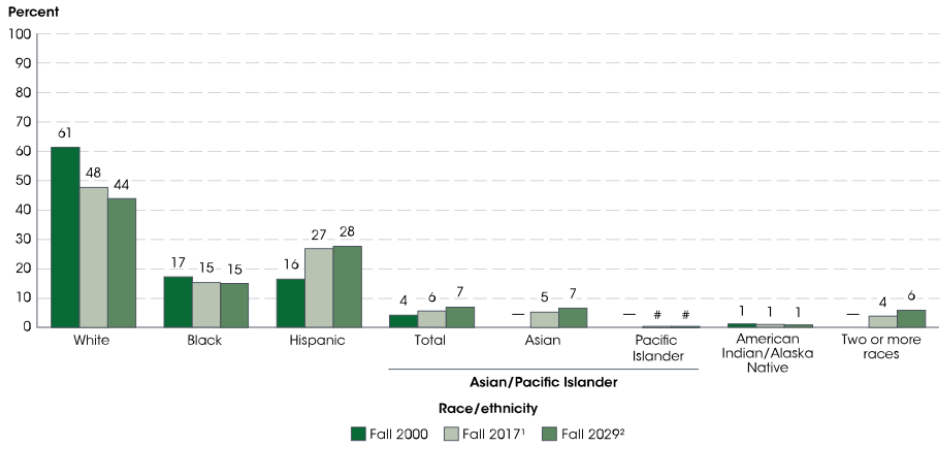
Some argue that this inequality is simply the product of great demographic shifts in the United States. In an excerpt from the 2016 book *Ferguson's Fault Lines* Kimberly Jade Norwood argues: "Brown v. Board of Education's vision of both integrated and quality education for all students has been lost and indeed may be impossible to fulfill in the 21st century." She agrees that "under racially segregated systems pre-Brown, most Black students were not receiving quality education; most White students were," and

goes on to explain *Brown v. Board of Education* had two goals: one of integration, and one of quality education for all. But she believes such a dual goal is "no longer possible." According to Norwood:

> it is not simply that public schools today are more racially segregated than 40 years ago, although this is true. And it is not simply that Black, Asian, and non-White people of Latin American descent make up a majority of the students in public schools today (thus the term "majority minority"), although this is also true. But, we must consider two other key factors: (1) White student enrollment in public schools has decreased over the years and (2) White births have declined significantly over the years. All of these realities challenge any goal to integrate schools as that term was defined in Brown.

Her argument appears to be that the segregation we see today is merely a product of a "minority majority" demographic: a country where Caucasians no longer make up the majority (NCES, 2020).

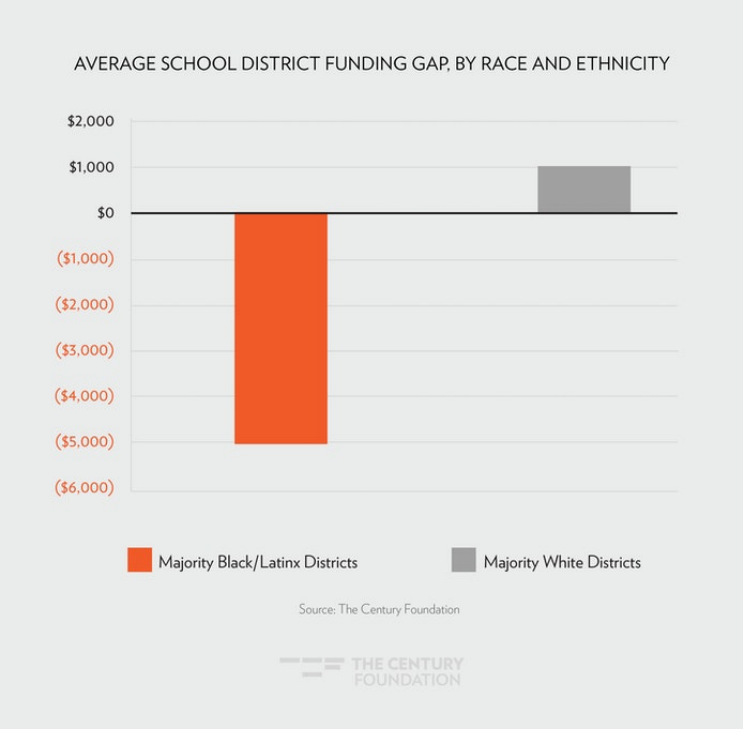
Figure 1. Percentage distribution of students enrolled in public elementary and secondary schools, by race/ethnicity: Fall 2000, fall 2017, and fall 2029



— Not available.
Rounds to zero.
[1] Includes imputations for prekindergarten enrollment in California and Oregon.
[2] Data for fall 2029 are projected.

(NCES, 2020)

Despite Norwood's point, as the goal of a widespread quality of education remains unfulfilled, it is clear segregation remains a problem. A 2020 study by Rutgers Graduate School of Education professor Bruce Baker and The Century Foundation found that "districts with high concentrations of Latinx and Black students have much larger funding gaps, and are more likely to have funding gaps to begin with, than majority white districts" (Baker et al., 2020). According to the same study, "districts that have more than 50 percent Black or Latinx enrollment are nearly twice (1.95 times) as likely to have a funding gap than districts with minority enrollment less than 50 percent" (Baker et al., 2020). Nationally, districts with over 50 percent Black and/or Latinx students face a funding gap of more than $5,000 per pupil on average" (Baker et al., 2020). A funding gaps means a school has not been provided the necessary funding to properly support its students.



(Baker et al., 2020)

The second goal of *Brown v. Board of Education*, integration, remains an issue in the varied demographics of sprawling urban districts. There, research by Darling-Hammond shows "schools with high concentrations of low-income and minority students receive fewer instructional resources than others. And tracking systems exacerbate these inequalities by segregating many low-income and minority students within schools" (1998). Norwood sees the United States as diversifying in a way that makes segregation impossible. But this diversity is countered with America's increased urbanization (McPhillips, 2020), and it is in these urban districts that minorities and low-income students are concentrated, reflecting in *Brown v. Board of Education's* terms an America more segregated than ever. But here is where Norwood is wrong: having a greater share of the population be minority does not explain school minority numbers, as those minorities are still receiving an alarmingly substandard quality of education compared to White students.

Researchers focus on funding as a metric with good reason. According to Darling-Hammond, lack of funding is the catalyst in a series of cascading circumstances leaving:

> minority students with fewer and lower-quality books, curriculum materials, laboratories, and computers; significantly larger class sizes; less qualified and experienced teachers; and less access to high-quality curriculum. Many schools serving low-income and minority students do not even offer the math and science courses needed for college, and they provide lower-quality teaching in the classes they do offer (Darling-Hammond, 1998).

As Darling-Hammond correctly concludes, "it all adds up" (1998).

IV. The Widespread Inequality: Among Income Levels

Income inequality remains rampant throughout the United States public school system. Darling-Hammond wrote "there's an underlying truth to teacher strikes that have happened of late and those looming on the horizon: We live in an era of extreme income inequality and one of the places it's hitting hardest is in our schools" (2019). She sees this as a glaring flaw in the design of the United States public school system: "what many people overlook is that this economic inequity is hard-wired into our school-funding systems. Most of these systems developed over the decades through a process that relied largely on local property tax bases. As a country, we inadvertently instituted a school finance system similar to red-lining in its negative impact" (2019). Those born into the public school system have little choice in the matter, "grow up in a rich neighborhood with a large property tax base? You get well-funded public schools. Grow up in a poor neighborhood? The opposite is true" affirms Darling-Hammond (2019).

The numbers paint a picture no different in detrimental inequality then those demonstrating the system's widespread segregation. Darling Hammond found "the highest-spending districts in the United States spend nearly 10 times more than the lowest-spending, with large differentials both across and within states. In most states, children who live in low-income neighborhoods attend the most under-resourced schools" (2019). Baker's 2020 study produced similar data, finding that "low-income school districts are more than twice as likely to have a funding gap as higher income districts" (Baker et al., 2020). Furthermore, it was "districts with the highest concentrations of poverty—those in the highest 20 percent of districts by Census poverty rate—are 2.6 times more likely to have a funding gap" (Baker et al., 2020). Baker's

model calculated that “the average gap in these districts is more than $6,700 per pupil.” Darling-Hammond notes “states typically offset these disparities to some extent, but rarely provide an equitable system that can respond to student needs” (2019). In fact, “these funding disparities are so acute and widespread that lawsuits have been filed in more than 40 states in an attempt to remedy inequities” (Darling-Hammond & Raikes, 2019).

Less likely to have adequate resources at home, low-income students face further disadvantages when they attend an underfunded school. Biddle and Berliner state the evident in a 2002 journal article: “the achievements of disadvantaged students are more likely to suffer in response to inequities in school funding for two reasons: Those students are more likely to attend poorly funded schools, and they are more likely to be hurt by lack of academic resources when schools are underfunded” because they lack them elsewhere (Biddle & Berliner, 2002).

The ability for parents to play a role in their schools, and their community, also contributes to income dependent advantages. Poorer communities typically feature a greater share of single parents, working multiple jobs to support their children (JCHS, 2018). That leaves no time for getting involved in either the school or the community, leaving parents unable to organize school and community sponsored events which uplift and enrich student’s lives. Meanwhile, wealthier communities tend to have more two parent families, and parents employed in jobs that provide more leisure and greater flexibility in hours. These parents have extra time they can put towards school and the community; not only planning and hosting events, but fighting for school initiatives if they feel the need to. These advantages are amplified in districts where the allure of a

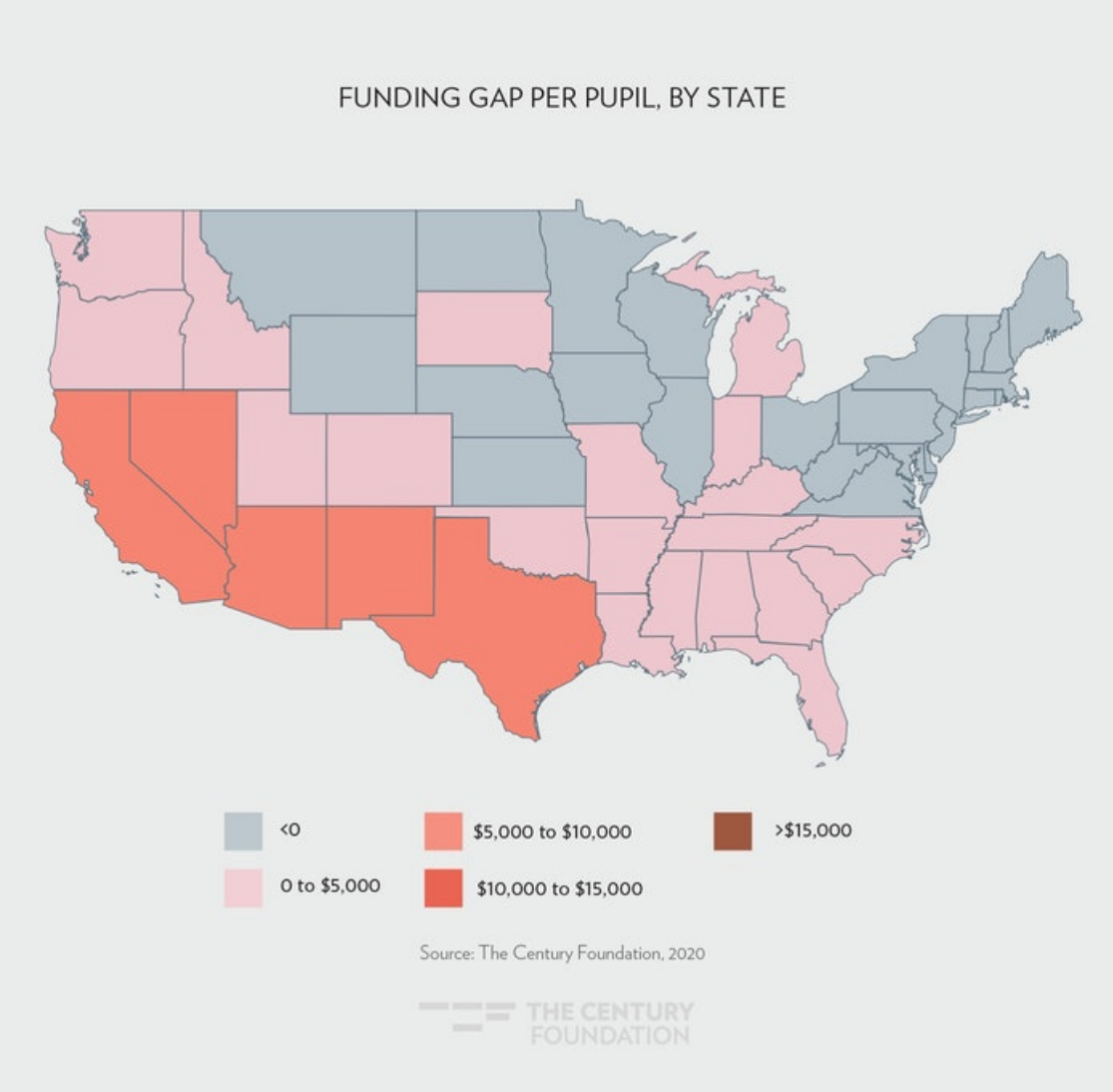
good quality public school attracts education minded parents with the resources to move (Badger, 2016). Already revealing preference in moving to the location for the education, these parents have self-sorted into a community of other motivated parents; all with the time and determination to improve their children's education. Children near a low quality school find themselves stuck in communities with few able, and willing, to collectively help their education.

Low-income student disadvantages are multiplied even further upon considering the kind of advantages high-income students are getting, and using, to accelerate past students in lower income households. For the Center for American progress, it is all part of a frustratingly monstrous series of hurdles low-income students face. As explained by education scholar Carmel Martin, now deputy director for economic mobility on the White House's Domestic Policy Council, these "students in high-poverty communities continue to have less access to core academic services that increase student outcomes. Core services that have a significant influence on instructional quality and student performance are systematically unavailable to students in low-income schools relative to students in higher-income schools. These critical services include early childhood education, quality teachers, and exposure to rigorous curriculum" (Martin et al., 2019). Low-income students able to overcome such crippling disadvantages are not a testament to the systems success, but to their unbelievable ability in escaping a system seemingly designed to fail them.

V. The Widespread Inequality: Among Districts and States

State investment in K-12 education is a policy choice of the state (Baker et al., 2020). As such, there are differences in policy across states, differences in demographics across states and, consequentially, differences in equality. With little control over their fate, students are subject to the quality of education in the state and district they grow up in. A student who grows up in a Northeastern state has essentially won the education lottery -- potentially with access to some of the best education in the world. On the other hand, the majority of students in southeastern states most likely have nowhere near the same kind of access to quality schools and resources. Depending on the state, and especially the districts, students may experience a level of education ranking at the very bottom among developed nations. The inequality among states, even when adjusted for population, spans tens of billions of dollars. According to The Century Foundation and Baker's 2020 study, California, Texas and Florida are the three states with the highest funding gaps, totaling a gap greater than $10 billion total for each (Baker et al., 2020). All three reside where funding gaps per pupil are the largest: the southwest and southeast United States. The states with the largest funding gaps per pupil are Arizona at $7,020 per pupil, followed by Nevada at $6,693 per pupil and California at $6,089 per pupil (Baker et al., 2020). While education quality will differ across the state, these numbers reveal just how much effort a state is putting into addressing statewide education inequality among its districts. Inequality has only preceded to get worse: many of the states with large funding gaps are those which experienced large budget cuts subsequently after the 2008 Great Recession. Baker's study found that "the four states that implemented the largest statewide cuts to public education following the Great

Recession—Oklahoma, New Mexico, Florida, and Arizona— are all among the 10 worst states for funding gaps per pupil" (Baker et al., 2020).



(Baker et al., 2020)

State performance varies just as widely as state-funding inequality. A separate 2020 study by Baker compared state education levels to those of other nations. Massachusetts was equivalent to some of the top performing nations in the world, and "well above expectations with respect to socioeconomic and cultural context" (2020, p. 3). Other states, such as North Carolina, were not entirely, but for the most part "well

below Massachusetts and Finland, but similar to Slovenia" (2020, p. 3). Baker notes that "Massachusetts public education system is as large and as diverse—if not more so—than many of the nations in this mix. So, too, is North Carolina" (2020, p. 3). Every state faces challenges in trying to educate their populace, yet some succeed. Sharing a comparably low gap in funding, New Jersey, New Hampshire and Minnesota perform at similar rates in comparison to international student test scores (2020, p. 3). So are these the exceptions, and North Carolina is the norm?

No, explains Baker: "there are many that are better, and roughly an equal number that are worse. Much worse" (2020, p. 3). To put it simply, a large portion of the United States struggles to educate their populace. Connecticut, despite being collectively a high-income state like New Jersey, underperforms in educating its students. Mississippi, New Mexico, Alabama, and Louisiana rank as some of the worst in the world when compared with developed nations (2020, p. 3). As Baker concludes, "To an extent, these low scores are a function of the high child poverty rates and low family income in these states. Because they lack capacity, many of these states are less able to invest in robust K–12 school systems. But many states simply choose not to invest in quality public schools and their children suffer the consequences" (2020, p. 5). Additionally, in what comes as no surprise to Baker, "the low effort that leads to low spending also leads to non-competitive teacher wages" (2020, p. 12). Thus, "On average, states that put up more effort to fund their schools have more competitive wages for their teachers" (Baker et al., 2020).

Baker's research put a lot of emphasis in comparing outcomes; he finds that where there is inequality in spending between states, there is also inequality in outcomes. He spent a large portion of his career working on a model to "estimate the per pupil costs

for every district nationwide to achieve national average outcomes on reading and math assessments" (Baker et al., 2020). He used the model to then determine the minimum each state and district needed to spend on each of its pupil. His findings will be more fully scrutinized later on in this paper, but for now they can be summed up simply: "on average, districts spending more than enough to achieve average outcomes are achieving or exceeding average outcomes, and those spending too little are falling short on outcomes" (Baker et al., 2020).

Baker spends time highlighting that "effort" in supporting education improves outcomes as well. Some states are more affluent then others, allowing them to attribute less spending on education and still produce outcomes above the national average. More affluent states do not have to spend as much on education, because children from wealthier families typically need less help to be academically successful. Many of the tools for academic success are already present at home, the school does not need to supply them. That allows wealthier states like Massachusetts to put in little "effort" and still reach national average outcomes, while a state such as North Carolina must fund education with average "effort " (Baker et al., 2020) in aiming for similar levels of success. It follows then, as Baker finds, that states such as "New Mexico, Mississippi, and Georgia, aren't as lucky. Each puts up greater than average effort, but still falls well below needed funding levels to achieve national average outcomes" (Baker et al., 2020). This is where Baker sees room for a federal role. The federal government would help "those states that simply lack the capacity to raise their education spending levels to achieve even modest outcome goals. Meanwhile, federal policy must place pressure on

states such as North Carolina, Arizona, Florida, and California to increase their effort and close the spending gap" (Baker et al., 2020).

In his research, Baker provides the following "report card," which does a premier job revealing the stark contrasts among states, and the troubled state of the United States education system. The table, according to Baker, "provides a scorecard on the strengths and weaknesses of a particular state's finance systems and how a state's performance compares to other states in the region and across the country" (Baker et al., 2018). The table judges states based on four measures of fairness: the equality of *funding distribution* and attention to high-need students, the *fiscal effort* of states based on two metrics, funding effort per pupil termed as *funding level,* and the *coverage* of a state's public schools in how many of the state's students choose to enroll in public school instead of private options.

Table 1. National Report Card, 2015

	Funding Distribution	Fiscal Effort		Funding Level	Coverage
		GSP	Income		
Alabama	F	B	C	39	37
Alaska		A	A	2	5
Arizona	F	F	F	48	6
Arkansas	B	A	B	36	22
California	C	F	F	32	31
Colorado	B	F	F	35	8
Connecticut	C	C	D	6	30
Delaware	A	F	A	10	48
District of Columbia					51
Florida	C	F	F	41	45
Georgia	B	C	B	37	36
Hawaii		F	F		49
Idaho	C	F	F	49	9
Illinois	F	C	C	16	32
Indiana	C	F	F	20	29
Iowa	D	C	B	18	7
Kansas	C	C	C	25	21
Kentucky	C	C	C	34	46
Louisiana	C	D	C	28	50
Maine	F	A	C	14	3
Maryland	D	C	C	12	47
Massachusetts	A	D	D	7	18
Michigan	C	C	C	24	19
Minnesota	A	C	C	13	20
Mississippi	C	A	B	44	44
Missouri	F	C	C	31	39
Montana	D	B	C	30	16
Nebraska	C	C	B	21	38
Nevada	F	F	F	42	13

Table 1. The National Report Card (cont.)

	Funding Distribution	Fiscal Effort GSP	Fiscal Effort Income	Funding Level	Coverage
New Hampshire	D	B	C	11	12
New Jersey	A	A	A	5	25
New Mexico	D	C	A	33	17
New York	C	A	A	1	41
North Carolina	B	F	F	47	33
North Dakota	F	F	F	19	26
Ohio	A	C	B	15	40
Oklahoma	C	F	F	45	10
Oregon	C	F	D	27	15
Pennsylvania	C	B	C	8	35
Rhode Island	D	A	A	9	42
South Carolina	C	A	A	26	27
South Dakota	F	F	F	40	14
Tennessee	C	F	F	43	43
Texas	D	F	D	38	23
Utah	A	F	C	46	1
Vermont	C	A	A	3	11
Virginia	F	C	C	29	28
Washington	C	F	F	23	24
West Virginia	C	A	A	22	4
Wisconsin	B	C	C	17	34
Wyoming	A	A	A	4	2

Note: Funding Level and Coverage rankings are colored by quartiles: Q1, Q2, Q3, Q4.

(B. Baker et al., 2018)

While the state a child resides in does play a significant role in their chances of having access to an effectively funded school, the greatest differences in policy and equality are between districts within states. Even high-spending states have numerous districts that are underfunded (Baker et al., 2020). New York and Connecticut as a whole appear to be doing a good job supplying an adequate share per pupil, and although that is

the case for the majority of districts, they still both have a number of districts with large funding gaps. Baker's model discovered large funding gaps in the Bridgeport, Waterbury, New Britain, Hartford, and Chaplin school districts of Connecticut (Baker et al., 2020). These districts have "relatively higher rates of Black/Latinx enrollment and higher poverty rates than other districts in the state (Baker et al., 2020). The New York districts of Schenectady, Utica, and Syracuse are no different (Baker et al., 2020). Among school districts, annual funding per student can range from less than $4,000 to more than $15,000. Typically, school districts with 1,000 or more students receive roughly $5,000 per pupil every year, but affluent districts will frequently get $10,000 a pupil or more (Biddle & Berliner, 2002). It is the norm, rather than the exception, that students in districts who need the least help, receive the most.

Outcomes within state districts follows a similar pattern to the one among states: where there is inequality in spending, there is inequality in outcome. Looking back at Massachusetts and North Carolina, Baker determines that "the lowest-poverty Massachusetts districts spend almost $10,000 more per pupil than they would need to in order to achieve national average outcomes. And, they achieve higher than national average outcomes—among the highest in the nation" (Baker et al., 2020). Even then, Baker acknowledges that "only the highest poverty quintile in Massachusetts spends less than needed to achieve national average outcomes, but it still performs at about the national average, somewhat exceeding expectations" (Baker et al., 2020). Looking at North Carolina, Baker also finds its districts "exceed expectations, with the lowest-poverty districts spending slightly less than needed to achieve national average outcomes, but still exceeding national average outcomes" (Baker et al., 2020). Even so, "North

Carolina's lowest-poverty districts achieve less than Massachusetts's high-poverty districts (quintile 4 of 5). The second (low poverty) and third (median poverty) North Carolina districts are approximately average, and higher-poverty districts spend less than needed, and achieve less than average" (Baker et al., 2020). Despite past criticism of Massachusetts and North Carolina effort, clearly they are doing something policy wise, beyond spending more, that allows their students to succeed better than their spending should indicate. Perhaps the way they implement curriculum, support their communities, or hire their teachers, has a positive impact on student outcomes.

VI. The Widespread Inequality: Among Teachers

There is an unequal distribution of teachers, particularly qualified teachers, in the United States. In her 2001 article, Darling-Hammond investigated the effectiveness, and the equality of distribution, of America's public school teachers. Unsurprisingly, "minority and low-income students in urban settings are most likely to find themselves in classrooms staffed by inadequately prepared, inexperienced, and ill-qualified teachers because funding inequities, distributions of local power, labor market conditions, and dysfunctional hiring practices conspire to produce teacher shortages of which they bear the brunt" (Darling-Hammond, 2001). Merely judging by certification, Darling-Hammond found "in 1994, just over 20% of newly hired public school teachers were hired without having met regular certification requirements. The vast majority of these teachers were assigned to the most disadvantaged schools in central city and poor rural school districts" (Darling-Hammond, 2001; NCTAF, 1997).

Further analysis found that "districts with the greatest concentrations of poor children, minority children, and children of immigrants are also those where incoming teachers are least likely to have learned about up-to-date teaching methods or about how children grow, learn, and develop—and what to do if they are having difficulties" (Darling-Hammond, 2001). Most concerning, "when faced with shortages, districts often hire substitutes, assign teachers outside their fields of qualification, expand class sizes, or cancel course offerings. These strategies are used most frequently in schools serving large numbers of minority students" (Darling-Hammond, 2001; NCES, 1997a; NCTAF, 1997). The California Commission on the Teaching Profession (1985) conclude that disproportionate numbers of minority and poor students are taught throughout their entire time in school by the "least qualified teachers" (Darling-Hammond, 2001; California Commission on the Teaching Profession, 1985).

A student's prospects are even worse with STEM teachers. UCLA Graduate School of Education professor Jeannie Oakes discovered in a 1990 nationwide study that, "based on teacher experience, certification status, preparation in the discipline, degrees, self-confidence, and teacher and principal perceptions of competence" (Darling-Hammond, 2001; Oakes, 1990) low-income and minority students have alarmingly small chance at being taught by a qualified math or science teacher. Students in high-minority schools have a coin flip's chance, 50 percent, of being taught by a math or science teacher who has even been certified (Darling-Hammond, 2001; Oakes, 1990). Prospects are even lower for students in high-minority schools hoping to be taught by a teacher who is "fully qualified for their teaching assignment by virtue of the subject area(s) they are prepared to teach." Oakes concluded, like Darling-Hammond, that the "evidence lends

considerable support to the argument that low-income, minority, and inner-city students have fewer opportunities… They have considerably less access to science and mathematics knowledge at school, fewer material resources, less-engaging learning activities in their classrooms, and less-qualified teachers“ (Darling-Hammond, 2001; Oakes, 1990). The STEM field is commonly deemed the safest, the most reliable, root to the middle or upper class. But if a large portion of students never even have access to a qualified STEM teacher, the field’s ability to uplift remains available to only a lucky, or privileged, few.

Part 2: Causes of Inequality

I. The Misguidance of Previous Research

It is easy to place the blame on politicians for the current state of education. University of Missouri professor of psychology and sociology Bruce J. Biddle and Arizona State University professor of education David C. Berliner attribute equity in school funding opposition to several factors: "ignorance about funding differences; unthinking acceptance of traditional methods for funding education; selfish desires to keep personal taxes low; and inappropriate beliefs about the causes of poverty that reflect individualism, essentialism, or the culture of poverty thesis" (2002). But, maybe excluding selfishness, it is important to acknowledge those in opposition to education reform are not entirely responsible for the things they believe. All beliefs, and all problems, stem from somewhere; in both finding solutions and addressing misguidances, finding the root cause remains fundamental.

Thus, any discussion of inequality must note the decades of misguided research partly responsible for steering education reform wrong. For instance, a reluctance to provide equal funds for schools have been fueled by claims from prominent researchers, reviewers, and others asserting that the level of funding for schools does not affect student achievement (Biddle & Berliner, 2002). Robert C. Pianta, the dean of the University of Virginia Curry School of Education and Human Development, affirms "the one thing we haven't tried in the past 30 years is sufficiently investing in our schools." He attributes such a policy position as a product of the landmark U.S. National Commission on Excellence in Education 1983 report "A Nation at Risk: The Imperative for Educational Reform." For Pianta, the report's long-standing damage comes from a

single assertion within “A Nation at Risk”: “an ‘incoherent, outdated patchwork quilt’ of curriculums” had “lowered standards and positioned student to coast to their high-school diplomas” leaving them without “the skills they needed to succeed in the workforce.” With such a pronouncement, Pianta saw “A Nation at Risk” brand into America’s psyche “a prevailing, decades-long perception of public schools” that saw them as “at best, uniformly underperforming and, at worst, beyond repair.” It was then pushed that America’s only hope lay in new, rigorous, comprehensive standards for all students (Pianta, 2019).

But Pianta sees glaring problems with both the framing of the problem, and America’s impulsive response. Pianta is confident this “wasn’t the only way to interpret the data.” First, the “committee chose to de-emphasize findings that showed that American high school students were actually graduating and attending college at rising rates” (Pianta, 2019). In emphasizing certain data, the report encouraged funds to deviate towards “particular, standards-based reforms” (Pianta, 2019). And in the midst of the cold war, with pressure to outperform the Soviet Union, states were quick to shift to a standards-based system in an effort to correct a problem illustrated as dilapidated (Pianta, 2019).

But in their swiftness they neglected the deeper issues. Lynn University professor of education James W. Guthrie and University of North Carolina professor of education Matthew G. Springer corroborate Pianta’s take: A Nation at Risk (NAR) “posited as its principal thesis that downwardly spiraling pupil performance had rendered the U.S. education system dysfunctional, thereby threatening the nation's technological, military, and economic preeminence. The report further asserted that only by elevating education

achievement could the United States avoid subordinating itself to its educational superiors and economic competitors. In retrospect, it is apparent that the report was wrong on both counts" (2004, pg. 8). In its error, Guthrie and Springer contend that a "willingness to define student achievement exclusively by standardized tests, a trend that was spurred by NAR's flawed analysis of test score declines… may have foreclosed reform of policies regarding other, equally important aspects of student achievement" (2004, pg. 8). For Pianta, "the reforms enacted overemphasized standardized tests in place of other kinds of changes that might address the real problems: education support and after-school programs that have been demonstrated to shrink 'gaps'." To be clear, the problem is not the standardized tests themselves, but the obstructive incentive to teach to the test, and not to the benefit of the student. That means the damage goes further than neglect, an emphasis on bureaucratic standards "'hampered educators' flexibility and satisfaction in the classroom, driving the downward spiral of the profession that continues to unfold today" (Pianta, 2019).

Since then, "A Nation at Risk" policy has continued to fail the United States: it was that dramatic shift, according to Pianta, that formed "the basis for modern-day education reform." 2002's No Child Left Behind, which Pianta calls "the most comprehensive education bill in a generation" directly embodied A Nation at Risk's misguidance nearly 20 years later. It did little good for students. In implementation, Pianta observed the law's corrective accountability systems "left states with no choice but to lower their standards to assure satisfactory rates of proficiency." It was only repealed a decade later when, driven by an anti-federalist outcry, Congress reversed course and passed the Every Student Succeeds Act (Pianta, 2019). Even then, the Every Student

Succeeds Act was merely Congress bandaging a self-inflicted wound. Pianta is yet to witness an actual step forward, Congress never proceeds in addressing "the biggest problem plaguing U.S. public schools: a lack of resources." Pianta's frustration remains unbounded, "despite the many forms of capital devoted to addressing the purported crisis over three-plus decades of school reform efforts, we have failed to take one common-sense step: sinking adequate public funds into our schools, teachers and children, and distributing it equitably."

A Nation at Risk's influence persists partly as a result of those who revel in its conclusions; Professors Bruce J. Biddle and David C. Berliner observed that often claims of funding's futility "come from sources that are traditionally hostile to public education" (2002). One of the most influential research studies following "A Nation at Risk," conducted by the conservative think-tank the Heritage Foundation in 1989, found that "virtually all studies of school performance, in fact, reveal that spending has little bearing on school achievement. . . . Research demonstrates that [reforms focused on performance assessment] will be far more successful than [those] that concentrate on salary levels and class size" (Biddle & Berliner, 2002).

Biddle and Berliner attribute such sentiment to more than just "A Nation at Risk," singling on a preceding study they argue primed Americans to disregard and undermine their own education system (2002). The Coleman Report came out in 1966, "commissioned by the National Center for Education Statistics in response to the Civil Rights Act of 1964" its "third section focused on the determinants of achievement and came to a surprising conclusion—that factors related to students' home backgrounds and peer groups in their schools were major generators of achievement, but that school

quality and level of school funding had little or no impact after home and peer factors were taken into account" (2002). Civil rights had framed the equality of public education as an issue of national interest. As one of the first comprehensive studies done on public education the report was bound to set how Americans saw public education. Such sentiment was only encouraged by a press that, Biddle and Berliner note, "widely trumpeted its surprising conclusion about the ineffectiveness of school factors. Thus, the public was led to believe that research had "proven" that schools (and their funding) had little effect, and the fat was in the fire" (2002). In the wake of the Coleman report release Biddle and Berliner saw "conservative forces hostile to the public sector rejoiced because their negative opinions about public schools had been vindicated. Educators, political liberals, and advocates for disadvantaged students became alarmed and began to 'explain away' the report's conclusions and to attack its authors" (2002).

Americans perpetuating the report's findings, caught up in all the excitement of something so groundbreaking, neglected to evaluate a report that ultimately was innovative, but at the same time inherently flawed in its unprecedented examination. "The Coleman report was lengthy, its procedures and statistics were complex, and its text was murky—and, as a result, almost nobody actually read it" argue Biddle and Berliner (2002). They found numerous issues with the report:

> among other problems, the report's authors had failed to use available scaling techniques to validate their procedures, had made serious mistakes when assigning indicators to major variables, and had failed to measure crucial variables now known to be associated with school effects. In addition, the report

had used non-standard procedures for statistical analyses, which generated falsely deflated estimates of school effects (2002).

Such was apparent to academics only a couple years after the reports publication. In 1970, Glen G. Cain and Harold W. Watts of the University of Wisconsin wrote a scathing criticism of the Coleman Report called "Problems in Making Policy Inferences from the Coleman Report." Published in the American Sociological review, they conclude "the analytical part of the Coleman Report has such serious methodological shortcomings that it offers little guidance" (pg. 228).

Despite education researchers like Cain and Watts deeming the report faulty, its findings laid the groundwork for decades to come, "and its suspect conclusion that level of school funding has little impact on student achievement passed into the public domain as a confirmed fact" (Biddle & Berliner, 2002). It gave policy makers who benefited from underfunding education a tool to use in disregarding any comprehensive reforms that would require more funding. Such a powerful tool has made it very difficult to push effective education reform. There is no doubt aimless funding has little impact on schools, but almost all of the ways researchers have discovered we can improve schools require additional funding. "Of course, money matters – when it is used well" exclaims Columbia University Teacher's College professor Michael A. Rebell in a journal article noting the 50th Anniversary of the Coleman Report (pg. 184). The unprecedented nature of the report gave it unprecedented influence. As such, any research contrary to the Coleman Report's sentiments found its route to acceptance upstream, while anything in-accord could simply ride in its wake. While the Coleman report did not cause a policy change that can be clearly seen like "A Nation A Risk," it made it very hard, for decades,

to seriously talk about increasing public school funding in the common American political sphere.

Biddle and Berliner also attribute misguided efforts by early economists for engraining an anti-additional funding sentiment among Americans. These early efforts attempted to determine the impact of investing in public education. Biddle and Berliner argue that the notable economists undertaking such a task were, in doing so, "responding to ideas expressed by influential leaders in their field" (2002). It began in 1962 when Milton Friedman began "to preach a doctrine that favored privatization of most public enterprises (including education)" and continued a decade later when "Kenneth Boulding (1972) noted that increases in education funding seemed not to have been associated with greater student achievement" (Biddle & Berliner, 2002). These early studies, like The Coleman Report and "A Nation at Risk," laid the groundwork for how economists would study education. In the decades that followed, Biddle and Berliner discovered most economists turned to these "models for studying the effects of education investments" (2002). These studies, unsurprisingly, have mostly "not reported significant net effects of school funding" (Biddle & Berliner, 2002). It is these models, and the results they produce, that fuel the work of influential conservative economists like Eric Hanushek, who "has declared repeatedly that level of funding is not related to achievement in the real world of public education (see, for example, 1989, 1996a, 1996b)—a conclusion welcomed by those opposed to funding reform proposals" (Biddle & Berliner, 2002).

But when scrutinized and compared, studies supported by these models fail to hold up. These models are easily misused, because the methodology behind them is too simple to judge education without further input. They do not require a wide and varied set

of data in their use, and thus are commonly utilized by economists in ways which make them practically useless for the real world (Biddle & Berliner, 2002). In their research, Biddle and Berliner saw an underlying trend among studies that employed these models to determine that funding has little to no effect. Most "used small samples that did not represent the full range of schools, and most did not examine school funding directly but rather looked at funding-associated school characteristics—such as teacher salaries, student-teacher ratios, or administrative costs—that may or may not be tied to student achievement" (Biddle & Berliner, 2002). Many "also employed questionable measures and inappropriate techniques for statistical analysis" (Biddle & Berliner, 2002). Despite their decades long influence, economists practicing this bad form of economics remain in the minority in the 21st century. Meta-analysts Rob Greenwald, Larry Hedges, and Richard Laine "have noted that the bulk of studies by economists have reported positive net effects of funding, and if one combines their findings through statistical aggregation, the resulting pooled estimates suggest sizable effects of funding" (Biddle & Berliner, 2002).

"A Nation at Risk," The Coleman Report, the select work of early economists, and research that built upon what each had established pushed the United States in one direction, while diverting its attention from the others. "A Nation at Risk" invoked a nationwide tunnel-vision like focus on stringent standardization and strict accountability, creating a widespread ignorance to the various deeper issues that plague the United States' public school system. At the same time, the Coleman Report coupled with the initial economic findings, shutdown any burgeoning talk of addressing the very real, and consequential, funding problem public schools had. A culmination of flawed research

tracked the American School System to an inescapable route of ruin, and with that the education of its coming generations were failed by the miscalculations of those who found success through the system in place before. Maybe a lack of critical thinking has been engrained in American society for some time, but that does not mean it cannot be addressed. That starts with not only finding the problems that plague American public education, but locating each problem at its very root.

II. Causes of Inequality: Property-Taxes

The United States is the only advanced nation that employs property-taxes as its primary source for funding public schools (Biddle & Berliner, 2002). For most Americans, Biddle and Berliner believe such a revelation would be almost shocking; property-tax funded school systems have been an enduring and unquestioned feature of the United States for as long as anyone has been alive, it is simply how it is. But, as is sometimes the case, America's norms remains the worldwide exception. Contrary to the United States, most nations provide "equal per-student funding from general tax revenues for all schools throughout the country. Some nations also provide extra funding for disadvantaged students" Biddle and Berliner discovered (2002). With such a wide range of affluence among districts, a reliance on property-taxes only leads to as wide a range of school inequality across districts. Such a systematic connection is simply explained by Biddle and Berliner: "funding differences appear, in part, because much of the financial support for public schools comes from local property taxes, which means that the amount of funding that communities are able to provide for their schools varies according to community affluence" (2002).

Darling-Hammond goes beyond calling it just a systematic connection, for her a property-tax system is what hard-wires inequity into American school-funding systems. "Most of these systems developed over the decades through a process that relied largely on local property tax bases. As a country, we inadvertently instituted a school finance system similar to redlining in its negative impact. Grow up in a rich neighborhood with a large property tax base? You get well-funded public schools. Grow up in a poor neighborhood? The opposite is true," explains Darling-Hammond (2019). States offset these disparities to a small extent, but Darling-Hammond believes since they "rarely provide an equitable system that can respond to student needs" their impact is negligible. Thus, for Darling-Hammond, the key contributor in America's great public school education funding divide "comes largely from reliance on local property taxes" (2019). Districts with higher property values bring in more property tax revenues and, consequently, have more to fund their schools then poorer districts do (Darling-Hammond & Raikes, 2019).

As a result, district lines hold tremendous power in determining which children win the quality education lottery, and which do not. Journalist Sarah Jones, in covering the contrasts between schools in the state of Maryland, writes in *NY Magazine*: "Schools that are geographically close to one another can also be worlds apart" (2020). For example, at Walt Whitman High School in wealthy Bethesda, Maryland the excess resources exist for kids to study Japanese, ceramics, biotechnology and bioengineering (Jones, 2020). Only two percent of the school receives free or reduced lunch, according to data collected by ProPublica in 2018 (Groeger et al., 2018). Walt Whitman remains the exception within Montgomery county. While Whitman's students are mostly white and

well-off, the rest of the schools in Montgomery more accurately represent the county's demographics: largely minority and low-income (Jones, 2020). But because property values are much higher where Whitman is located, and are much lower in the rest of the county, only Whitman has such an abundance of resources that they can offer curriculum approaching, and surpassing, the college level (Jones, 2020).

But Montgomery county is just one example. Connecticut, one of the wealthiest states, has thousands of children attending some of the worst schools in the country (Semuels, 2016). It is no different than Whitman; students in affluent areas have access to resources meeting, and occasionally exceeding, most colleges while students in high-poverty areas only have access to the bare minimums required to attempt the state mandated standardized tests (Semuels, 2016). As Semuels describes, "high-poverty areas like Bridgeport and New Britain have lower home values and collect less taxes, and so can't raise as much money as a place like Darien or Greenwich, where homes are worth millions of dollars" (2016). And, because of the state's smaller size, its inequality manifests unconcealed, as areas of affluence stand adjacent to areas with income many degrees lower. Bridgeport is in the same county as Greenwich and Darien, while East Hartford is poor, but nearby West Hartford is affluent (Semuels, 2016). Semuels recognizes such flagrant disparity as commonplace: "in every state, though, inequity between wealthier and poorer districts continues to exist. That's often because education is paid for with the amount of money available in a district, which doesn't necessarily equal the amount of money required to adequately teach students" (2016).

There are stark differences between poor areas like New Britain, Danbury, Bridgeport, and East Hartford, and wealthier areas like New Canaan, Greenwich, and Darien demonstrates Samuels:

> Electives, field trips, arts classes, and gifted and talented programs available in wealthier districts have been cut in poorer ones. New Britain, where 80 percent of students qualify for free or reduced lunch, receives half as much funding per special-education student as Darien. In Bridgeport, where class sizes hover near the contractual maximum of 29, students use 15-to 20-year-old textbooks; in New London, high-school teachers must duct tape windows shut to keep out the wind and snow and station trash cans in the hallways to collect rain. Where Greenwich's elementary school library budget is $12,500 per year (not including staffing), East Hartford's is zero (2016).

These high-poverty school districts tend to get the least help, yet Samuels finds "such districts tend to have more students in need of extra help, and yet they have fewer guidance counselors, tutors, and psychologists, lower-paid teachers, more dilapidated facilities and bigger class sizes than wealthier districts" (2016). These descriptions find their origins in the testimony of an ongoing lawsuit against the state of Connecticut protesting the constitutionality of the property-tax school-funding system; lawsuits of a similar objection have been filed in more than 40 states (Semuels, 2016).

III. Causes of inequality: State Funding Allocation Policy

While district inequality is certainly concerning, state inequality remains even worse. While "students within the same school district can receive starkly different levels

of funding, the widest variation in per-pupil spending exists across state boundaries. The differences in average state per-pupil spending ranges from around $5,700 to $17,000" Martin determined (Martin et al., 2019). The distinct differences between states only further differentiate education quality. In 2019 Mississippi had a GDP of around 115 billion dollars (St. Louis Fed.), while Connecticut had a GDP of 287 billion (St. Louis Fed.). Considering it would be harder to educate more students then less students, population plays a substantial role as well. Since Mississippi has a student population of 493,650 students versus Connecticut's 550,954 (NCES, 2015), it has to educate nearly the same number of students as Connecticut with less money.

But as demonstrated earlier in illustrating the widespread inequality among states, those two factors do not tell the whole story. National Public Radio (NPR), through the NPR's Education Team and 20 member station reporters, conducted a collaborative nationwide study on public school spending. One of many findings from the study, NPR found that while most states do have certain fiscal limits to how it can spend on education; how much money there is to spend, and how it is spent, seems ultimately determined by the voters and their representatives. In 2005 Texas attempted to shrink the spending gaps between affluent and low-wealth districts by putting a cap on how much property tax revenue a district could raise and spend on its schools. In response, some 900 Texas districts called for a "hold harmless" on their district. As NPR found, "a hold harmless provision creates a kind of force field around a lawmaker's district, temporarily exempting its schools from, say, a budget cut." These "hold harmless" calls only did harm to the state as "those communities still saw limits to how much they could raise in property tax revenue. But, under the hold harmless provision, the state agreed to use state

dollars to make up that difference." As a result, "Some affluent districts that could raise money locally to pay for their schools were being told not to — and getting more state money in return This meant that even though Texas was now putting more money into education, those dollars were rarely used to help needy students, and would more frequently go towards the education of students who had been well funded before the bill (Turner et al., 2016). According to NPR, "this hold harmless phenomenon isn't specific to Texas, either. In many states, powerful districts with declining student enrollment have lobbied for, and won, exemptions from state efforts to make school funding more equitable." For instance, in Oregon, a state commission determined their schools were woefully underfunded. Voters acted upon the commission, and approved a requirement that state lawmakers deliver the determined funds. But, as in Texas, the ruling left an out for legislators; NPR found the ruling allowed legislators the choice of either funding "to the level recommended by the commission or [writing] a report explaining why they didn't." Since then, lawmakers have not once fully funded the commission's recommendation (Turner et al., 2016).

IV. Causes of Inequality: Title I (Federal Funding)

Despite being of such national concern, federal funding on average makes up around 10 percent of school spending; an amount of both huge importance, but too little impact (Turner et al., 2016). The federal government only began to play a significant role, to an extent, in 1965 when President Lyndon Johnson signed the Elementary and Secondary Education Act (Turner et al., 2016). Part of his war on poverty, the federal education program, now commonly referred to as simply "Title I," sent federal dollars to

schools that educate lots of low-income students (Turner et al., 2016). After more than half a century, it remains the only major source of federal funding for public schools. Georgetown economist Nora Gordon explains how they currently are distributed:

> Title I funds are appropriated by Congress annually and are now allocated using four different formulas (see table 1), untouched by ESSA. The amount of funds a district receives per eligible child is a complex function of the number and/ or share of poor children in the district, average spending per pupil in the state, the size of the state, historical Title I allocations at the state and district levels, the ratio of education spending to per-capita income in a state, and within-state variance in local school spending. Because the total appropriation is a fixed pot and some rules (hold harmless and the small state minimum) ensure minimum grant levels, any one district's allocation is also an opaque function of every other district's allocation (pg. 7).

While these formulas determine for congress how much they should spend, the formulas currently call for way more monetary support then congress is willing to give. Gordon found that the simplest formula, the Basic Grant, called for $50 billion in funding for fiscal year 2015. That $50 billion, through a "ratable reduction" process, was brought "down to the amount appropriated by Congress" (Gordon, 2016, pg. 7). Congress decided to supply only $6.5 billion in aid (Gordon, 2016, pg. 7).

TABLE 1.

An Overview of the Four Title I, Part A Formulas under NCLB

Grant type	LEA eligibility	Share of 2015 appropriation	How eligible individuals are weighted
Basic	At least 10 (count) and at least 2% of school-aged population eligible.	45%	Not weighted
Concentration	Over 6,500 (count) or at least 15% of school-aged population eligible.	9%	Not weighted
Targeted	At least 10 (count) and at least 5% of school-aged population eligible.	23%	Eligible individuals get additional weights based on poverty brackets. These weights are calculated using brackets of eligible counts or rates, whichever yields the greatest allocation to the specific district. ("Number weighting" permitted.)
Education Finance Incentive	At least 10 (count) and at least 5% of school-aged population eligible.	23%	State-level allocations weight eligible individuals in the state based on state-level measures of effort. Different sets of weights apply for distributing the state allocations to LEAs. (Like targeted grants, these weights use counts or rates.)

(Gordon, 2016, pg. 8)

The complexity of the intertwined four formulas leads Title I funds to be allocated inefficiently and erratically. Part of the confusion comes in reducing the formulas; Gordon finds "the rate at which allocations are reduced varies greatly across districts, with a different rate for each of the four formulas for any given district" (pg. 8). According to Gordon the formula's themselves complicate things as well: "the result of these formulas is that the amount of Title I funds per poor child varies greatly even across districts and states with similar poverty rates" (pg. 8).

Further chaos comes in the complicated rules and regulations that Title I funding currently requires. Holmes County, Mississippi, with a median income a little more than $22,000 a year, "serves some of the poorest students in the nation" (Turner et al., 2016). "District resources — or a lack of them — reflect that poverty, with Holmes spending $8,368 per student (the number has been adjusted by Education Week to reflect regional cost differences)," reports NPR. That comes out to $3,500 below the national average for every child; those slight margins mean the extra $1,500 the county receives per student

from Title I goes a long way. But for Mississippi, that is not far enough. On “last year's statewide reading assessment, nearly two-thirds of the district's incoming freshmen scored well below grade level” notes NPR. With more funding, Holmes County Superintendent Angel Meeks says she would use her federal dollars to pay for a much needed literacy coach and a reading interventionist (Turner et al., 2016). With the way Title I funding is distributed, Mississippi’s small allotment comes almost as a punishment; the program rewards states that spend more, while giving less to states where students receive less. Professor Nora Gordon has spent a good portion of her career studying Title I. "About a third of the kids in Mississippi are eligible [for Title I], more than any other state" (Turner et al., 2016), Gordon says. "Yet, among all states, Mississippi is near the bottom in how much help it receives per child" (Turner et al., 2016). Holmes is one of the luckier counties in the state The average Title I allotment for students in Mississippi is $1000, yet NPR discovered Alaska, North Dakota, Vermont and Wyoming all have far fewer poor students yet receive more than twice the federal funding. Gordon found that the “real difference-maker is in the Title I math itself” (Turner et al., 2016). It rewards places that spend more, and “Mississippi, in addition to being one of the poorest states in the nation, also has one of the lowest per-pupil spending rates.” Gordon and NPR both determine “in this way, Title I, an anti-poverty program, privileges more affluent, high-spending states” (Turner et al., 2016).

A thorough 2018 report commissioned by Congress reached the same conclusion, but nothing ever became of it. *US News*, which spent three years attempting to have the report made public, found the report to be highly revealing. Its contents largely illustrated the program failing in its original purpose of equitably distributing funding (Camera,

2019). According to senior US News reported Lauren Camera, the report included “an overview of the Title I funding formula process, an analysis of each of the four funding mechanisms as well as analyses that isolate the impact of each of them, and a table of all the funding broken out by school districts.” The report avoided taking a stance on the issue, and instead intended to serve as a pulling back of the curtain, revealing the mystical method to its allocation. Tom Snyder, program director of annual reports and information at NCES and lead author of the report, says “the formulas themselves are very complicated. There are four different grants, and they have some similarities, but they all have their own special pieces. Initially, just getting started was hard to know exactly what direction to take… and it's difficult to wrap your head around how things work” (Camera, 2019). "One of our objectives was to get the information out to the policy analysts and those who are in the position to make decisions" (Camera, 2019), Snyder explains.

The report unearthed a seeming neglect for those in the middle. The poorest districts received the most Title I funding per student, at around $1,400, while the richest districts received the least per child from the welfare program at a not too far off $1,000 per child. The report also discovered that Title I tends to distribute higher funding to the most densely and least densely populated areas, mainly large cities and remote rural areas. Districts with the smallest populations, defined as those with a school-aged population of less than 300, had the highest Title I allocation of $1,400 per child. The largest districts, which had 25,000 students or more, had the second highest allocation at about $1,300 per student (Camera, 2019). The report discovered that “medium-size districts with a school-aged population anywhere from 5,000 to 10,000 students lost out

with the lowest Title I funding at $1,100 per student" (Camera, 2019). These funding allocations may have played a role in America becoming a nation of small towns and big cities, something Local Government Populations chief Amel Toukabri and Census Bureau statistician Laruen Medina reported in 2020. Possibly, Americans have been drawn to where their children receive the most funding: small towns and big cities. In the meantime, students in medium sized towns find themselves at a federally imposed disadvantage (Toukabri & Medina, 2020).

Originally Title I was intended to support only select children in need, but as the report found, it appears Title I has come to play an important role in funding most students. Amel Toukabri and Lauren Medina explain that "notably, 95 percent of children helped by Title I dollars are on the receiving end because of a rule that allows schools where more than 40% of enrolled students qualify for Title I to use the funding for all students, regardless of whether they are eligible. That means that even though there are only about 12 million students considered eligible, Title I money ends up flowing to about 25 million students – nearly half of all public K-12 students in the U.S." While Title I is wide reaching, its impact is inconsistent; something Snyder acknowledges, ""The funding touches a lot of children in the U.S., something like half the students in the United States are receiving some Title I funds, on the other hand, there are relatively high amounts on per-child funding for some states compared to others" (Camera, 2019). As the education experts interviewed by *US News* concede, there are better and simpler ways for the federal government to fund its schools (Camera, 2019).

V. Causes of Inequality: Teacher and Curriculum Inequality

States that put more effort into funding their schools tend to provide more competitive wages for teachers. As Baker ascertains, even in states where the average salary for any job is much higher than the national average, a state like Massachusetts can manage to pay their teachers a wage competitive not only compared to other states, but compared to similar jobs within the state (2020, p. 11). A state like North Carolina has an average salary much lower than Massachusetts, and when you compare their teacher wage versus other wage earners in the state, it simply does not make fiscal sense to pursue a teaching job there (Baker, 2020, p. 11). The result: states who fund their school-systems with little effort give citizens little economic reason to be a teacher (Baker, 2020, p. 12). School funding effort largely determines teacher wage competitiveness relative to comparable wage earners, states that have more competitive teacher wages tend to fund their schools better (Baker, 2020, p. 13). Low wages are enough to deter many prospective teachers from the profession. In many states, the financial hardships that come with teaching simply are not worth whatever reason someone may have for pursuing teaching (Darling-Hammond, 2001). Teaching seems a difficult job at any wage, but a comparably low wage means teachers will probably have to sacrifice quality of life just to teacher. The majority of states do not pay teachers a competitive wage, and in comparing teacher wages to non-teacher wages, competitively teacher wages are at an all-time low (Baker et al., 2018; Baker, 2020, p. 11;). While many are interested in teaching, only a small section of the workforce pursue the profession. With the state of teacher wages, it is hard to fault the many who were interested in the profession, but turned to a more lucrative job out of basic necessity.

If Americans hope to provide a better quality of schooling for their children, they should certainly be interested in increasing the level of competition in the teaching profession. In fact, it has been the teacher quality that plays a significant role in student abilities. In studying Alabama, one of the lowest-effort states in the United States, Harvard economics professor Ronald Ferguson and Stanford education economics professor Helen Ladd "found that more of the difference between the high- and low-scoring districts was explained by teacher qualifications and class sizes than by poverty, race, and parent education" (Darling-Hammond, 1998). The results of that study were corroborated by a separate study Ferguson did of Texas, a higher-effort state. In an analysis of 900 Texas school districts the results of Ferguson's study showed that "teachers' expertise—as measured by scores on a licensing examination, master's degrees, and experience—was the single most important determinant of student achievement, accounting for roughly 40 percent of the measured variance in students' reading and math achievement gains in grades 1-12" (Darling-Hammond, 1998). Furthermore, Ferguson again found that "after controlling for socioeconomic status, the large disparities in achievement between black and white students were almost entirely due to differences in the qualifications of their teachers. In combination, differences in teacher expertise and class sizes accounted for as much of the measured variance in achievement as did student and family background (Darling-Hammond, 1998). A further study in Tennessee elementary schools found that students who are assigned to ineffective teachers for three years score nearly 50 percentile points lower on achievement tests than those assigned to highly effective teachers over the same period (Darling-Hammond, 1998).

When minority and low-income students do get access to quality teaching, they excel at the same level as any other student demographic. As Darling-Hammond found, initial test scores and racial background matter little compared to the difference "curriculum quality and teacher skill make." In concurrence, she concludes "much of the difference in school achievement found between African-American students and others is due to the effects of substantially different school opportunities, and in particular, greatly disparate access to high-quality teachers and teaching" (Darling-Hammond, 2001; Barr & Dreeben, 1983; College Board, 1985; Dreeben & Gamoran, 1986; Dreeben & Barr, 1987; Oakes, 1990; Darling-Hammond & Snyder, 1992).

Minority and low-income students are more likely to have access to an ineffective teacher, then an effective one. The National Commission on Teaching and America's Future found "that new teachers hired without meeting certification standards (25 percent of all new teachers) are usually assigned to teach the most disadvantaged students in low-income and high-minority schools, while the most highly educated new teachers are hired largely by wealthier schools" (Darling-Hammond, 1998). According to the Darling-Hammond, in schools with the highest minority enrollments "students have less than a 50 percent chance of getting a math or science teacher with a license and a degree in the field. In 1994, fully one-third of teachers in high-poverty schools taught without a minor in their main field and nearly 70 percent taught without a minor in their secondary teaching field" (1998).

When low-income and minority students are denied access to quality teachers, they lose access to a quality curriculum. Darling-Hammond affirms "teacher expertise and curriculum quality are interrelated, because a challenging curriculum requires an

expert teacher" (1998). Consequently, as Darling-Hammond explains, further inequality is caused as students are "tracked": "the most expert teachers teach the most demanding courses to the most advantaged students, while lower-track students assigned to less able teachers receive lower-quality teaching and less demanding material. Assignment to tracks is also related to race: even when grades and test scores are comparable, black students are more likely to be assigned to lower-track, nonacademic classes" (1998). Darling-Hammond affirms that "tracking persists in the face of growing evidence that it does not substantially benefit high achievers and tends to put low achievers at a serious disadvantage, in part because good teaching is a scarce resource, and thus must be allocated." (Darling-Hammond 2001; Kulik & Kulik, 1982; Oakes, 1985; 1986; Slavin, 1990; Hoffer, 1992) In trying to best utilize the resources available to expediate the education of some through special college preparatory courses or similar, often the least fortunate suffer as a result of circumstances beyond their control (Darling-Hammond 2001; Rosenbaum, 1976; Finley, 1984; Davis, 1986; Oakes, 1986; Talbert, 1990; NCTAF, 1996).

The potential for inequality only increases for younger students, who are tracked before they even have had the chance to learn much. Early tracking often limit them to inferior teachers and curriculums for the rest of their schooling experience. Darling-Hammond notes that it is at the elementary school level that "the distinguishing feature of such programs… is not their difficulty, but their quality" (2001). These programs succeed in challenging and empowering students, building a passion for learning that will allow them to succeed as they continue through their education. Meanwhile, those placed in lesser tracks:

> are exposed to a limited, rote-oriented curriculum and ultimately achieve less than students of similar aptitude who are placed in academic programs or untracked classes… Teacher interaction with students in lower track classes is less motivating, less supportive, and less demanding of higher-order reasoning and responses. These interactions are also less academically oriented, and more likely to focus on behavioral criticisms, especially for minority students. Presentations are less clear and less focused on higher-order cognitive goals (Darling-Hammond, 2001; Oakes, 1985).

These students are set up for failure.

However, a significant portion of the time, high minority and low-income schools simply do not have the means to offer a quality track. According to Darling-Hammond, "high-minority schools are much less likely to offer advanced and college preparatory courses in mathematics and science than are schools that serve affluent and largely white populations of students" (Darling-Hammond, 2001; Matthews, 1984; Oakes, 1990). She attributes these inabilities to "the unavailability of teachers who could teach these upper-level courses, or who can successfully teach heterogeneous groups of students, reinforces these inequalities in access to high-quality curricula" (Darling-Hammond, 2001).

Darling-Hammond finds that quality teaching appears so infrequently within disadvantaged schools "in part because good teaching is a scarce resource, and thus must be allocated. Scarce resources tend to get allocated to the students whose parents, advocates, or representatives have the most political clout. This situation results, not entirely but disproportionately, in the most highly qualified teachers teaching the most enriched curricula to the most advantaged students" (2001). Making a quality education a

political decision, and not an unquestioned right, only places children's futures into the hands of forces beyond their control, with little interest for their individual well-being.

VI. Causes of Inequality: The Charter School Distraction

Former Secretary of Education Betsy DeVos strongly believes not in investing in the public education system, but in investment to build up formidable competition from independent schools. DeVos calls it "school choice":

> "Choice in education is good politics because it's good policy. It's good policy because it comes from good parents who want better for their children. Families are on the front lines of this fight; let's stand with them…This isn't about school 'systems.' This is about individual students, parents, and families. Schools are at the service of students. Not the other way around… School choice is about recognizing parents' inherent right to choose what is best for their children. That's the manifestation of expanding human liberty in America" (DeVos, 2017).

But in preaching how public school dependence constricts human liberty, and an investment in school choice expands it, DeVos forgets how public education affords many students opportunities they would never have otherwise. It takes on the upliftment of every student without promise of profit, turning no child away because of increased need or "poor" fit. Most children do not have the ability to move to a better school, or represent the school in ways that benefit the school's standing. That is why, when done equitably, there is no choice in public schooling. A local public school should represent a conveniently close place where students can most realize their potential, not the place that

justifies a costly tuition, a stringent admissions process, or an elaborate commute. Baker expands on the complicated policy implications of liberty:

> Liberty and equality are desirable policy outcomes. Thus, it would be convenient if policies simultaneously advanced both. But it's never that simple. A large body of literature on political theory explains that liberty and equality are preferences that most often operate in tension with one another. While not mutually exclusive, they are certainly not one and the same. Preferences for and expansion of liberties often lead to greater inequality and division among members of society, whereas preferences for equality moderate those divisions. The only way expanded liberty can lead to greater equality is if available choices are substantively equal, conforming to a common set of societal standards. But if available choices are substantively equal, then why choose one over another. Systems of choice and competition rely on differentiation, inequality, and both winners and losers (2018, p. 28).

A preference for liberty may appear convenient to those who know their liberty of choice is nearly boundless, but, in education funding especially, policies weighted towards liberty only favor those whom life has already afforded great liberty in how they live.

In fostering competition in the form of charter schools, Baker argues what the country has done has only further fueled inequality. As he points out, "the 'best' choices are often those that can garner additional resources. And the 'best' choices will always have limited availability due to numerous constraints on scaling up, including access to supplemental resources" (2018, p. 136). That everyone can have access to these best choices, at a level more efficient then public schools already provide, seems to be not

much more than a myth. Baker further explains "expanding the mix of providers and provider types in a common space is more likely to result in increased variations in quality and spending than in convergence toward equity. Private providers have widely varied access to outside resources and thus highly unequal opportunities for 'revenue enhancement.' The incentive for school operators is to pursue whatever means necessary to be the preferred school of choice (for the preferred students)—not to spend only what is needed to provide equal opportunity to achieve common outcomes" (2018, p. 157). If every school in the country were to operate like most charter schools do, competition would lead to a handful of students being able to benefit from the school that dominated available resources, while the rest are left with the scraps. Therefore, if the goal is to uplift all of America's youth, charter schools prove inefficient especially if part of a dual system. The creation of dual systems of education serving common localities only further erodes equity, and to an extent, efficiency (2018, p. 136). According to Baker "Specifically, charter school expansion and citywide choice models, lacking advanced planning and sufficient regulation, complicate equitable resource distribution across schools and children, including access to space and transportation. Managing equity in a competitive system using alternative models of governance and operations for both day-to-day activities of schooling and for access to and maintenance of capital assets (land, buildings, equipment) is complex" (2018, p. 136). But for policy makers who have managed these complexities poorly, it seems to have become easier to shift responsibility for solving education to the market in these dual systems that exacerbate rather than ameliorate inequality.

As Baker has observed, this fostered competition among schools has actually done little to spur innovation. Successful charter school models do not stray far from how public schools currently operate. "Analyses by charter advocates at the American Enterprise Institute have found that the dominant form of specialized charter school is the 'no-excuses model,' which combines traditional curriculum and direct instruction with strict disciplinary policies and school uniforms, and in some cases extended school days and years" (2018, p. 68), notes Baker. The effective model appears to be a public school, with a lessening of student liberties and a greater exertion of resources.

Furthermore, the charter school model does not appear to be more efficient fiscally. States Baker:

> (A) close look at high-profile charters in New York City indicates that their success reflects their access to additional resources and a fairly traditional approach to leveraging them… For each of these major operators… the share of low-income (those who qualified for free or reduced-price lunch), English language learners, and children with disabilities is lower than for district schools, in some cases quite substantially. On average, these schools are serving far less needy and thus less costly student populations than are the district schools (2018, p. 68-79).

These distinctions are important, because most large charter school studies in the past have neglected to disclose the statistical demographic advantages enjoyed by their student bodies (Munyan-Penney, 2018). Beyond teaching a less costly student body, Baker shows again charter schools with success simply usually have more resources and use them not very different then a public school would: "Collectively, these figures tell a

story of high-profile, well-funded CMOs in New York City leveraging their additional resources in three logical and rather traditional ways by hiring more staff per pupil… by paying their teachers more at any given level of experience and degree; and… by paying them more to work longer school hours, days, and years. In other words, they pay more people for more time" (2018, p. 70).

Baker's research into New York charter schools was substantiated by studies in other states besides New York. A multi-year tracking of North Carolina charter school students by Syracuse University public administration and international affairs professor Robert Bifulco and Stanford's Helen F. Ladd determined "that students make considerably smaller achievement gains in charter schools than they would have in public schools. The large negative estimates of the effects of attending a charter school are neither substantially biased, nor substantially offset, by positive impacts of charter schools on traditional public schools" (2006a, p. 50). A follow-up study by Bifulco and Ladd one year later found "that North Carolina's system of charter schools has increased the racial isolation of both black and white students, and has widened the achievement gap" (2006b, p. 31). Their research further revealed something interesting about the selective effects of charter schools, that:

> the relatively large negative effects of charter schools on the achievement of black students is driven by students who transfer into charter schools that are more racially isolated than the schools they have left. Our analysis of charter school choices suggests that asymmetric preferences of black and white charter school students (and their families) for schools of different racial compositions help to explain why there are so few racially balanced charters (2006b, p. 31).

That same degree of racial sorting was also seen in Indianapolis charter schools as determined by a 2015 study by John Hopkins University School of Education professor Marc L. Stein. It seems, when paying close attention to the inherent makeup of charter schools, charter schools show clear disadvantages over public schooling.

But the heart of DeVos' argument is less about the advantages independent charter schools have for the students, and more about the greater liberty they offer parents. DeVos argues that paying for public education through taxes denies parents the liberty to directly invest in their own child's education, but such reasoning completely ignores the good public education does beyond just educating a taxpayers child. The only "expenses associated with each individual's education choices are" not just the "current annual expenses of educating that individual" but also the "marginal costs and economies of scale, foundational elements of origins of public institutions" says Baker (2018, p. 30). At its simplest, educating the country's children is an investment in America's future. We do so through taxes because, as Baker agrees, "it allows us to do so at an efficient scale of operations" (2018, p. 30). "Public spending does not matter only to those using it here and now. These dollars don't just belong to parents of children presently attending the schools, and the assets acquired with public funding… do not belong exclusively to those parents" (2018, p. 30), declares Baker. The money parents contribute to education goes far in ensuring a functioning, supporting, and advantageous society not only for them, but for their children and grandchildren as well.

VII. Causes of Inequality: Lingering Qualms About Significantly Increasing Investment in Public Education

For some policy makers, spending even more money on education seems an absurd thought. But they are wrong to believe additional spending would almost certainly be wasted. Two of the most prevalent dissenting claims about increasing school funding were laid out in 2011 by Microsoft co-founder Bill Gates (Baker, 2018, p. 3). Then, he argued in a Washington Post op-ed "over the past four decades, the per-student cost of running our K-12 schools has more than doubled, while our student achievement has remained virtually flat. Meanwhile, other countries have raced ahead" (Baker, 2018, p. 3). In a separate article for the Huffington Post, Gates makes the claim that "compared to other countries, America has spent more and achieved less" (Baker, 2018, p. 3).

Such claims stem from two beliefs. Baker sees those hostile to increased spending commonly maintain "that spending has skyrocketed primarily because staffing costs have skyrocketed, yet those increases in staffing, and/or compensation (salaries and benefits) for staff, have been largely inefficient. Public schools have faced little or no pressure to seek more efficient technological substitutions, whether by replacing staff with emerging technologies or using emerging technologies to select and retain fewer, less costly, more productive teachers" (2018, p. 3). According to Baker, many also claim "that US schools have not changed for over a century, while the world around them has, largely due to technological innovations" (2018, p. 3). The failures of the American school system, relative to the success of other countries and our claimed success in the past, are purportedly stem from "the stagnant model on which we rely: kids in rows, sitting at desks, listening to a teacher at the front of the class" (2018, p. 3-4). The belief is that

investments in anything resembling stagnation, and not innovation, would be a continued illogical use of taxpayer money. To do so would be to only further America's educational decline relative to the rest of the world (Baker, 2018, p. 4).

But while Baker believes "it may be true that our schools must adapt to a changing world, claims that they have not been doing so, that they are trapped in a distant past," these claims "are greatly exaggerated" (2018, p. 4). According to Baker, these arguments obscure "a far simpler explanation: many schools and many districts simply do not have sufficient resources to provide an adequate and equitable, much less evolving, education for their students" (2018, p. 4). As Baker later explains:

> the United States is faced with a combination of seemingly high education expense (but noncompetitive compensation for its teachers, given large class sizes) and a high rate of child poverty…. It's hard to conceive how such a combination would render the US comparable in raw test scores to low-poverty nations like Korea and Finland or to small, segregated, homogenous places like Singapore and Shanghai… Lower-poverty, higher-spending states that have been included in international comparisons, like Connecticut and Massachusetts, do quite well, while lower-spending, higher-poverty states like Florida do not (2018, p. 47).

What makes education in the United States so much more inefficient than other countries is inequality. If a 2011 New York Governor Andrew Cuomo actually believed himself in declaring, as a justification of cutting education spending, "not only do we spend too much, but we get too little in return" (Baker, 2018, p. 4), then he grossly misunderstands his own state. Governor Cuomo faces a difficult problem, but he needs to

be realistic. He complains that "we spend more on money on education than any state in the nation, and we are number 34 in terms of results" (Baker, 2018, p. 4), but such a complaint has much more to do with New York's makeup than the efficiency of funding. New York spends the most, but only ranks 34th, because its uniquely necessitous populace requires such a uniquely high investment. Not only is New York State home to one of the most populated, diverse, cities in the world, but it is also made up of large swaths of high-poverty rural land (Bump, 2017). As touched on before, as long as many of these high poverty areas in New York such as Schenectady, Utica, and Syracuse continue to not receive the funding necessary to succeed, that ranking of 34 will remain (Baker et al., 2020). With so many states and districts needing so much help, while some have enough and a handful have more than enough, fragmentation in America exists at such a level, that the problem cannot be explained as just the United States, or a specific state, spending too much.

Instead, the problem persists simply: in specific places and student groups, the United States and states have been spending excessively, while for most places and student-groups they have been spending too little. It has been made clear that when money does manage to directly reach the students who need it, it can have a pivotal impact on a student's educational success. Such a belief had driven the Century Foundation to fund a collection of school-funding research projects, and as they argue, their investment in "a wide and rigorous body of research [has made] it clear: spending matters in education. Greater investments in schools translate to improved student outcomes, and these outcomes are more pronounced and significant for low-income and minority students" (Baker et al., 2020). Their "first-of-its-kind national cost model

study… for every state and school district in the country—more than 13,000 in total" determined "the United States is underfunding our public schools by nearly $150 billion annually" (Baker et al., 2020). That is more than two times what the United States currently spends on education. It is no surprise then that 7,224 total districts, "serving almost two-thirds of public school students, or more than 30 million children in total" were found to be underfunded and in need of "greater public investment, enough to fill what we [the Century Foundation] call a 'funding gap'" (Baker et al., 2020). If the United States hopes to compete with the rest of the world, education wise, solving its uniquely wicked problem begins with spending a lot more on those who have needed it most.

Part 3: Addressing Inequality

I. How a Proper Investment in Education Pays for Itself

When it comes to education, a sizeable contribution cannot be thought of as an expense; it deserves to be thought of as an investment. “Inadequate school funding derails the future for students already struggling against the odds—intensifying disparities that harm society as a whole by reducing young people’s capacity to contribute to society” explains Darling-Hammond (2019). We only get a net-positive, as opposed to the current net-negative return on investment, “when we provide adequate funding for resources such as well-prepared teachers and school leaders, smaller class sizes (especially in the early years), and extended learning time.” These returns come in the form of improved student outcomes, and thus an improved country (Darling-Hammond & Raikes, 2019). One large-scale 2015 study estimated that “a 22% increase in per-pupil spending throughout the school years for low-income children would be large enough to eliminate the educational attainment gap between children from low-income and nonpoor families” (Jackson et al., 2015). Another study, done in 2008 by Columbia University's Teachers College economist Henry M. Levin, asserts “each additional high school graduate adds hundreds of thousands of dollars to the economy as they earn better wages and pay higher taxes, while contributing to reduced costs for health care, unemployment, crime, and incarceration. The contribution climbs dramatically with the attainment of an advanced degree.”

Providing further evidence that an investment in education would pay for itself, a 2009 study by RAND corporation senior economist Stephen J. Carroll and economist Emre Erkut found significant evidence that helping students attain higher levels of

education, even just that of graduating high school, tremendously benefits the taxpayer. First they found that more highly educated people contribute more in taxes as a result of higher earnings. Higher earnings "realized by more highly educated people result in higher tax payments and higher payments to social support and insurance programs, such as Social Security and Medicare." In addition to paying more taxes, those with more education draw less from social support programs. As they explain in their study, "these reductions in the costs of social support programs represent a value to taxpayers, who would otherwise have to fund the programs at a higher level. The RAND researchers found that the greatest reductions in spending on social support programs were associated with an individual graduating from high school rather than dropping out." Caroll and Erkut discovered that having more highly educated people significantly decreases the incarceration rate, further saving taxpayers money. For the average U.S. born white male, "educational attainment from some high school to high school graduation would be associated with increased tax payments over his lifetime equal to $54,000" in 2002 dollars. Those findings "were similar for other groups. Therefore, regardless of a student's gender or race/ethnicity, raising the level of education he or she attains is associated with benefits for the public budget." In their findings they determine, conclusively, "raising students' levels of education yields net benefits to the public budget."

It also helps create democratically involved citizens (Darling-Hammond & Raikes, 2019). Darling-Hammond found that "in addition to increased costs of welfare and crime, our failure to educate all students well has produced a widening gap between the rising number of job openings in our increasingly high-tech, knowledge-based

economy and the number of workers skilled enough to fill them" (2019). Education allows citizens to fullfill their civic duty. A country benefits when its citizens have a better capacity to think critically in deciding among electoral candidates, legislative initiatives and other democratic opportunities. Citizens cannot due their "civic duty" if they have no idea what that means, or how to go about it. Investing in education remains as much essential to the success of the population, as it does to the success of America as a democracy. "Money spent on schools alone will not entirely level the playing field for low-income students and students of color, but it's an essential step. Providing every child with a quality education is not just a moral imperative, it's a pragmatic necessity if we are to thrive as a country" Darling-Hammond definitively declares (2019).

II. Addressing: The Allocation Problem

Current funding methods on the federal, state, and district level seem to have only increased national education inequality of all types. The goal, in increasing funding for those who need it, and reforming the way those funds are targeted, is a national equality of success. Creating a system to do so would require comprehensive data on current school funding that allows policy makers to develop a more informed distribution system. The state of Wyoming has been doing just that for decades. While Wyoming's education model has been successfully equitable for decades, it is only in the last couple years that enough data has come together to implement such an informed and effective system on a national level. Baker, in analyzing that data, just last year managed to come up with a formula able to distribute funds across the United States to eliminate funding inequality at the districts level. Baker's national formula, combined with Wyoming's simple and

equitable system for funding, produces an education system that can work on a national level. But, before this paper can breakdown the details of such a system, it must first justify why such a radically new system remains necessary to the United States.

Any amount of funding is meaningless if it does not reach those who need it. So just as important as increasing funding, is making sure that funding is properly allocated; and as has been detailed throughout this paper, districts and states do not effectively focus their funds to those who need it most (Roza, 2010, p. 76). Even when high-priority functions have been identified, funds fail to reach their target (Roza, 2010, p. 76). Nearly every state has failed to implement a system without fundamental flaws in its equity. Further confirming what has already been established, Marguerite Roza describes the current outlook for school funding:

> researchers have seen how district policies direct a smaller share of unrestricted dollars for the education of disadvantaged students than for the education of others. They have seen how undocumented practices spend a great deal of money on some schools, while other schools in the same district are shortchanged. In reality, spending varies significantly from school to school within a district, driven not by policy or strategy but by budgeting practices that accommodate teacher preferences, political forces, and haphazard distribution of a multitude of uncoordinated programs and services." The current system remains too broken to be trusted with any level of funding increase. Roza acknowledges that "simply infusing more money into the system provides absolutely no guarantee that the new funds will land on those students that are currently shortchanged (p. 76).

With how districts and states currently allocate, it can be assumed, as Roza assumes, "that new funds will follow the same path as existing funds and therefore will not help address the many inequities and inefficiencies inherent in the finance system" (p. 76).

The current system needs drastic changes to how it distributes funding, before it can start effectively spending more. Roza feels that "simply layering on new funds will likely reinforce the existing spending patterns among schools" (p. 77). An adequacy report by the state of Illinois found that the state should be spending $2.2 billion more than it currently does, coming out to about $1,000 per student (Roza, 2010, p. 77). But researchers found 67 schools in Chicago where the state already spends past the target amount. In Roza's experience, any "new funds brought into the existing resource allocation system will undoubtedly result in even higher spending for these 67 schools, while others still will not receive enough funds to meet the target" (p. 77). Such was the case in Arkansas in 2003, which increased spending on education by $700 million with the recommendation that it be spent on instructional coaches, smaller class sizes, and tutors for students at risk of failing (Roza, 2010, p. 77). But legislators did not insist that expenditures match these recommendations, and the result, according to Roza, was these "new expenditures in the Arkansas school system took the following form: increased teacher salaries, larger than recommended class sizes, new administrative hires, new electives, and less than adequate numbers of additional tutors" (p. 77). In what was no real surprise to Roza, "while student performance improved, it did not reach expectations" (p. 77). Simply spending more money, without addressing inequality, will "leave the districts' decision making processes intact, making it likely that additional funds will follow the same patterns as current funds" (p. 77). America's schools are

woefully underfunded, but their inequality stems not from a blanket underfunding of every school, but from an underfunding of most schools and an overfunding of others. If every school was underfunded, or misusing funds, then there would be no inequality, there would just be an equality of failure.

As determined by the Organization for Economic Cooperation and Development (OECD), a belief in education equity has been the driver of "the highest performing education systems" in the world (Sahlberg, 2012). The OECD found that "the highest-performing education systems across the OECD countries are those that combine quality with equity" (Sahlberg, 2012). Pasi Sahlberg, director general of Finland's Centre for International Mobility and Cooperation, uses his native school system as an example of what the OECD means: "Finnish schools are funded based on a formula guaranteeing equal allocation of resources to each school regardless of location or wealth of its community" (2012). While it is true Finland does not experience the same high levels of poverty, and inequality, as the United States, those problems only further solicit a system where quality and equity in education are conceived as concomitant (Sahlberg, 2012). A new system of allocation must be impervious to the previous ailments of America's public school system, particularly a tendency to shift resources to the detriment of those who need it most.

An allocation system has to focus on the student: a pupil-based formula for allocation. To achieve its new core purpose, Roza determines, "the system must use some mechanism (a decision criterion or formula of some sort) that divides the funds out among the many providers-effectively determining how much money each receives" (p. 93). America's unique diversity at not only the state, but the district level as well,

requires a system which can divvy funds more specifically then the boundaries of location. Additionally, to ensure future overhauls are kept to a minimum, for such a system the decision criteria must work amid shifts in tax revenues and shifts in providers (Roza, p. 93). It should allow for student mobility, changes in each student's needs, and different local conditions (Roza, p. 93). It is key, Roza believes, that such a system acknowledge that "different students may pose different challenges" (p. 93). The system must be flexible, yet stringent to the point where local politics cannot influence allocation in favor of inequality. In targeting inequality, student differences must be accommodated by utilizing a method that differentiates allocations based on student needs. A per pupil-based system can be weighted on a basis of student-need. It can account for externally available resources and geographic conditions and decide funds accordingly as specific as per student (Roza, p. 93). Funds for a per-pupil system do not shift with local tax revenues or limit themselves to a specific provider. If implemented correctly, a per-pupil system would only be influenced by student need.

According to Roza, such a system allows funders to "disburse funds in ways that promote the best decisions about resource use, not to decide how to convert funds into purchased items" (p. 93). As long as the system currency is dollars, and not purchased resources, the system promotes "continuous learning about the best decisions on resource use" and "cannot close down options by dictating how some funds are converted into purchased resources" (Roza, p. 93). Because of its flexibility, "the allocation formula can be modified to affect the supply of providers for all student types in all locales" (Roza, p. 93). Dealing with a diverse range of students means relying upon a broad range of resources to properly teach different students. As school demographics shift, or better

options come to exist in how to apply funds to serve students, funds remain versatile in the sense that programs can be eliminated and the funds moved to better options (Roza, p. 93). Local and federal governments cannot micromanage every aspect of school budgets, and a pupil-based system allows for that versatility, while encouraging communities to take on the challenge of properly educating their least fortunate students.

As Baker recognizes, "identifying the gaps and setting targets" (Baker, 2018, p. 206) remains the pivotal first step in adopting a pupil-based system. The process begins "with high-quality analysis and data – more specifically, with the research that has been conducted," according to Baker, "to determine the per-pupil costs of achieving state-mandated student outcome goals across children, schools and districts and to evaluate whether existing resource allocated to local public school districts are sufficient for meeting these goals" (Baker, 2018, p. 206). The new system would determine what factors should be used to determine per-pupil allocation specifically at the student-by-student level. In addition, decisions have to be made about how outcome targets should be identified and who should set the; the state or the federal government. The goal is to spend enough to hit these outcomes, but not overspend. To identify the gap between uninformed assumptions of per-pupil allocation and reasonably informed ones (Baker, 2018, p. 207).

There are certain things Baker believes we can sensibly expect from a cost model linking per-pupil spending to outcome measures "with consideration for various district and student-population characteristics" (Baker, 2018, p. 208). As Baker identifies based on previous research, "higher spending is associated with higher outcomes and that cost of achieving common outcomes is higher in areas where competitive wages for recruiting

and retaining teacher workforce is higher, in remote areas with sparse populations and schools and districts that cannot achieve economies of scale, and in areas serving higher-poverty student populations (and/or other indicators of student need)" (Baker, 2018, p. 208).

Once a model has been determined, costs and reasonable outcome targets should become clear. Baker perceives analysis to produce "certain basic patterns." Baker explains, that "if we set out to conservatively estimate the costs associated with achieving national average outcomes, a target many districts and children should exceed, we should expect that only about half of districts, and/or the children who attend districts and schools, have resources inefficient to achieve these outcomes." Further, "there should exist a relatively clear, albeit imperfect, relationship between the size of the spending gap relative to what's needed and the actual outcomes achieved." Baker expects that if the model is reasonable, districts estimated to have too little funding to achieve the desired outcome currently "generally fall short of that outcome, and districts estimated to have more than enough generally exceed that outcome" (Baker, 2018, p. 208).

Legislators must determine a minimum outcome. Fortunately, a per-pupil system means a targeted outcome affects all students, not just the children of those with less political power. A lower targeted outcome means funding falls for everyone proportionally. Thus, in deciding what the minimum outcome would be, their decision equally affects all voters with children who attend public schools. To cut funding, would mean to lower the targeted outcome and cut funding for every student, not just the usual cuts to schools with a high percentage of low-income and minority students. As a result, Americans in every state would have to value the collective education and elevation of

everyone; when they fight for the education of their own children they are fighting for the education of others.

A per-pupil system will most likely lower the funding for schools in higher-income areas, schools that receive more than enough funding, but it will not cause higher-income families to abandon public schools en masse as some have assumed. In a 2009 study, Baker analyzed the funding and resource allocation of over 1,500 private schools across the country in order to compare them to the public schools in their area. Looking at non-religious schools belonging to the major independent school associations, Baker found that tuition rates for these schools were already 50-percent higher than neighboring public schools on average. Public schools have never been able to compete with independent private school spending, and to try to do so would be a funding race the United States government could never win. Lowering the per-pupil spending rate of public schools with too many resources would only widen the gap between private and public schools a small bit further, since that gap is already so large. Very few families in America can afford private school, and those who already care so deeply about per-pupil spending and can afford to pursue their preference for per pupil spending, most likely, already send their children to private schools (Baker, 2018, p. 77). It is unlikely a significant number of families, currently benefiting from a broken public school system, would abandon public schools in favor of private schools should their public school's funding decrease.

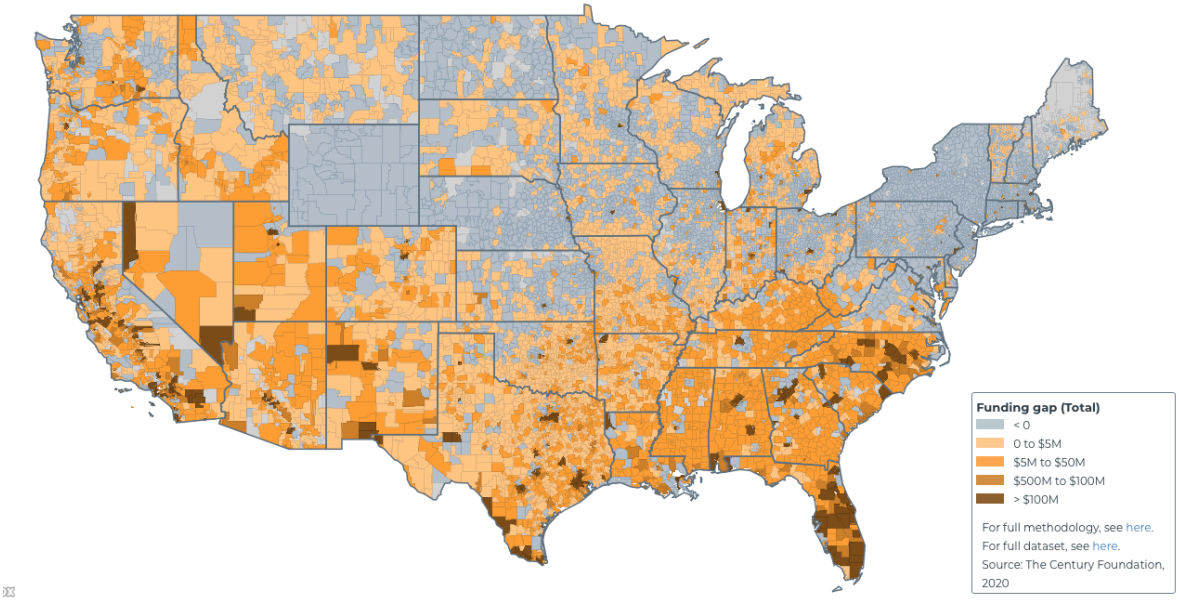
For Christian and Catholic schools, the situation is slightly different. Although they are much more affordable, with tuitions at half of what public schools generally spend per pupil, they spend as much or less per pupil as public schools, paid teachers

much less, and had comparable student-to-teacher ratios to public schools in their areas (Baker, 2018, p. 77). Most importantly, Catholic and Christian school student outcomes were between 3.8% and 11.9% worse than public schools according to Baker's research (Baker, 2018, p. 78). Previous research has indicated otherwise, but Baker's findings are backed up by a 2014 study by economists Todd Elder of Michigan State University and Christopher Jepsen of University College Dublin. They find, when adjusting for "selection bias" of Catholic school enrollees "Catholic schools do not appreciably boost test scores. All of the empirical strategies point to sizeable negative effects of Catholic schooling on mathematics achievement. Similarly, [they] find very little evidence that Catholic schooling improves behavioral and other non-cognitive outcomes once we account for selection on unobservables" (p. 28). Parents paying the money to send their children to Catholic or Christian schools are likely doing so because their neighborhood public schools are much worse in comparison.

Neighborhoods with good public schools, which would experience a funding decrease under a per-pupil funding system, are unlikely to have Catholic schools that are affordable enough to justify leaving the local public school to enroll. Tuition rates for Catholic and Christian schools were nearly 50 percent higher than nearby public district's per pupil spending, if parents main concern in choosing a school for their child was funding per-pupil then they would already have excellent reasons to send them to a Catholic or Christian school (Baker, 2018, p. 76). At the very least, it is unlikely a significant amount of families would leave public schools for Catholic and Christian schools because of changes in funding. In addition, since both private schools and Catholic/Christian schools pay their teachers less, and employ teachers of similar

collegiate prestige, there is little reason to believe a decrease in funding in some public schools will see a massive teacher exodus should salaries change (Baker, 2018, p. 77). In fact, for most schools in the country, teacher salaries should go up and public school teacher jobs will only be made more attractive. The important takeaway here is under a per-pupil system, reliant on the public school system, the vast majority of American families will all be forced to fight for better student outcomes for everyone.

Clearly those currently benefiting from well-funded public schools, who cannot afford private school, are not going to just let their school funding be taken away; however, if reductions in funding are low enough, and the optics are well done so the majority who benefit will see the merits of any reforms, then there is ample room to make progressive education reform politically feasible. “If they can afford private schools, they will pay the tuition. If they cannot, they will do everything in their power to defeat the politicians who hurt them so badly,” says Claremont McKenna Professor John Pitney. He is not wrong. For most, private school will not be an option, so their only means of keeping a funding advantage appears to be via political means. As discussed earlier, it is this local political edge that has kept many districts well-funded, even overfunded, while most other districts suffer. But as with anything in democratic politics, with the right optics any issue becomes a numbers game. For the vast majority of states, the majority of school districts are underfunded.



(Baker et al., 2020)

Thus, for the vast majority of states, these policies will benefit the vast majority. As this paper will show was the case in highly conservative Wyoming, because the policy clearly benefited the majority, it was possible to make it politically popular when implemented at the state level. It is important these policies are implemented at the highest levels of government possible, maybe even the federal level, because the support is there. For the last 11 years, the PDK/Gallup Poll has found that people rank "lack of financial support" (WFF, 2016) as the biggest problem facing America's schools. Americans, even though they incorrectly indicated in a 2015 EdNext poll that a third of education funding is federal aid, believe the federal government should contribute even more taxpayer money towards education (WFF, 2016). A comprehensive study of Illinois education reform efforts by Joel Filas found "evidence shows a strong connection in which plaintiffs have been tremendously successful in the court of public opinion" (Filas, 2020, pg. 2). For the few states where only a handful of districts need an increase in funding, that only means

less need for redistribution, likely dividing redistributions of funding to a negligible level surely to go unnoticed.

Even though further funding remains popular, it is important to keep any decreases in funding to levels that do not severely handicap well-funded schools. Redistribution should be progressive for everybody, with schools with the most excess funds facing the largest decreases in funds. Redistribution levels should ensure that those schools with massive amounts of excess funds should still be able to maintain the advantage they currently hold over other schools, but not one that is driven by funding, but by the advantages students and faculty enjoy outside of the classroom. A sizable amount of funding, combined with assets that exist outside of the classroom, will be enough to keep these schools performing far above national average.

Baker feels setting outcomes at the current national average outcome should be a good attainable short-term goal, but in no way a long term one (Baker, 2018, p. 209). According to Baker, "our current averages lie somewhere between well-funded, high-performing states like Massachusetts and poorly funded, low-performing states like Mississippi and Arizona" (Baker, 2018, p. 209). Too much of our country has abandoned their own education systems, providing an education that rivals only that of third-world countries, bringing the national outcome average down to something that is more than achievable, but not necessarily the result of a quality education (Baker, 2018, p. 209). Thus, Baker believes "our national goal should be to push more states in the direction of our top-performing states, but at this point getting to average may seem overwhelming" (Baker, 2018, p. 209). Rightfully so, America has dug itself a hole so deep that for most states it really seems insurmountable.

A per-pupil system would go far in fixing the seemingly impossible task of equalizing America's schools, but with a new system comes new problems. The whole federal and state funding systems must be overhauled, and such a system will likely require more funding than ever before. That funding must come from somewhere. On top of that, a change in the way funds are allocated requires new standards of evaluation and accountability. More so, it requires new rules and recommendations on how schools should use those funds. But new funds also mean new opportunities to utilize those to best educate America's populace. Marguerite Roza's wicked problem seems nowhere close to being solved.

Finding Gold in Wyoming: A Solution to the Allocation Problem

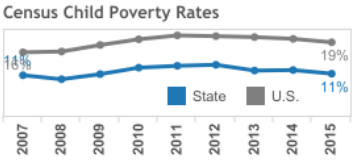
Policymakers in the state of Wyoming have implemented a first of its kind effective solution to the wicked allocation problem, one that shows promise as a viable model for the other 49 states. In doing so they have shown not only that a per-pupil system can be applied within the United States to an entire state, but that such a solution could be applied, and thrive, in a less progressive state. According to a 2015 survey by the Pew Research Center, Wyoming has a greater percentage of residents who identify as Republican, or lean Republican, then any other state. With pressure from its own state constitution, Wyoming was able to create, then pass, what Reason Foundation Policy Analyst Satya Marar defines as "a unique 'recapture' mechanism that pools excess revenue beyond what the state deems adequate, so every school district can be funded fairly." The result: Baker and the Century Foundation found Wyoming to be the only state in the United States where every district received adequate funding. There was not a

single district with a funding gap in Wyoming (Baker et al., 2020). Wyoming's system of taxation and dispersion still depends on local property, but it uses established methods of collecting local and assessed property wealth to capture and redistribute money that was once limited to local use. If nationally utilized, it would replace the country's crippling dependence on local property taxes with a system that targets funding to the schools that need it most. A system that isolates and divides each locality is unique to the United States, seemingly only to the detriment of most and the benefit of a few; the Wyoming system would bring the United States in line with the more equitable approaches employed in the rest of the world.

In comparing the consistent, and improving, success of Wyoming to similar surrounding states Montana and Idaho, it is clear that Wyoming's system proves to be the dramatically superior model. Wyoming's success could be attributed to its higher than average effort, but Montana's effort was not far behind. In 2015 Wyoming spent about 5.3% of their gross state product on education, while Montana spent 4.0%. Montana, while certainly doing better than Idaho, still has major problems. These issues are what the Wyoming system specifically aims to address. Below are each state's school funding profile for comparison, borrowed from the School Funding Fairness project headed by Bruce Baker:

Select State
Wyoming

Is School Funding Fair?
Wyoming Funding Profile

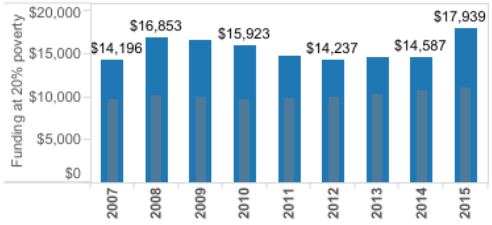


Funding Level

In 2015, Wyoming's funding level was ranked 4 in the country.

Rank

Funding Level

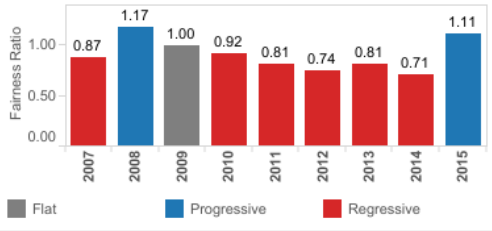


Funding Distribution

In 2015, Wyoming's funding was ***Progressive*** with high poverty districts receiving, on average, 111% of the funding of low poverty districts.

Grade

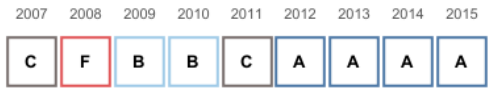
Fairness Ratio



Effort

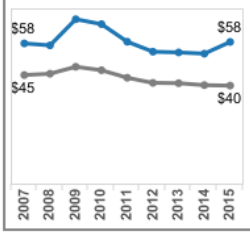
In 2015, Wyoming received a A in Effort, making a **higher than average** effort to fund its public schools.

Grade

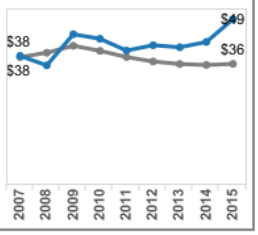


K-12 expenditures per $1,000:

Income



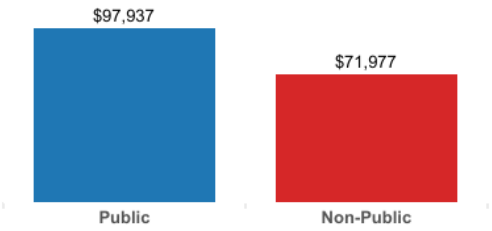
GSP



Coverage

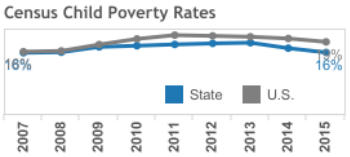
With **90%** of students enrolled in public school and a median household income for non-public school families that is **27% lower** than public school families, Wyoming is ranked #2.

Median Household Income by Type of School



Select State
Montana

Is School Funding Fair?
Montana Funding Profile

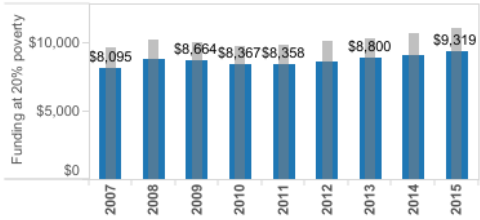


Funding Level

In 2015, Montana's funding level was ranked 30 in the country.

Rank

Funding Level

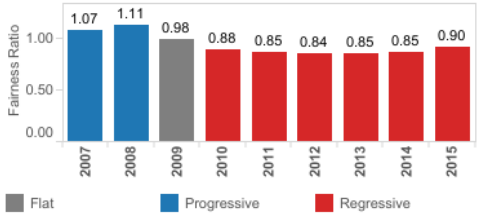


Funding Distribution

In 2015, Montana's funding was ***Regressive*** with high poverty districts receiving, on average, 90% of the funding of low poverty districts.

Grade

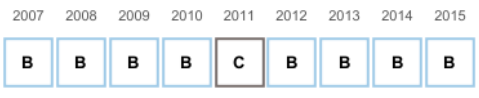
Fairness Ratio



Effort

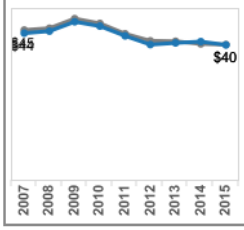
In 2015, Montana received a B in Effort, making **a higher than average** effort to fund its public schools.

Grade

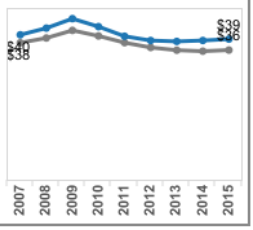


K-12 expenditures per $1,000:

Income



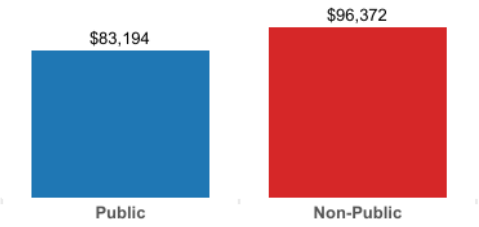
GSP

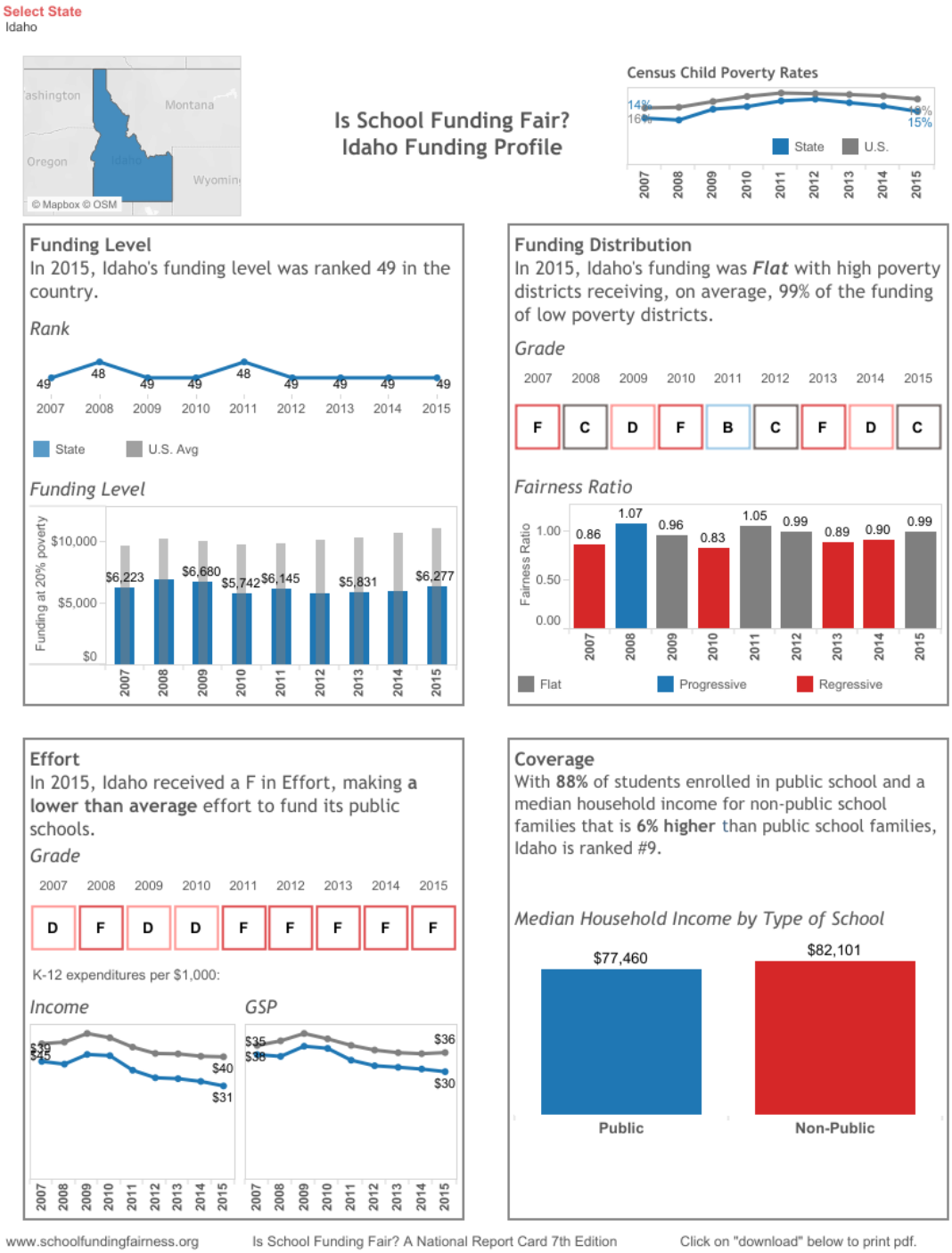


Coverage

With **88%** of students enrolled in public school and a median household income for non-public school families that is **16% higher** than public school families, Montana is ranked #16.

Median Household Income by Type of School





(Baker, 2015)

As Marar explains, this process of redistribution in Wyoming starts with a calculation (Willmarth, 2015):Wyoming must first determine “a revenue entitlement for

each school district using a resource-based allocation system that accounts for factors such as staff salaries and course materials." Essentially, they create a model that dictates the cost target per pupil depending on the needs of the district.

Bruce Baker's model for determining United States district funding gaps includes a similar component, allowing for even greater flexibility in adjusting costs for structural/geographic constraints, student populations and demographics, and initial costs. This will go far in addressing Marar's single criticism of Wyoming's system:

> even though the state equalizes revenue between districts of varying property wealth, this doesn't necessarily translate into greater amounts of per-pupil revenue for school districts that have a higher concentration of students living in poverty. Despite factoring student poverty into the revenue entitlement calculation formula, as of the 2013-14 school year, the average student in poverty attending a Wyoming public school attracted $340 less in cumulative local and state dollars than the average student not in poverty. This reflects that Wyoming's school finance is not strictly "progressive" despite the improvements in equity spurred by equalizing local revenue differences between districts. This underscores the importance of state policymakers addressing both funding equalization and allocation when reforming funding formulas.

Wyoming actually leads the nation in adequately funding high poverty districts (Baker, Carlo, et al., 2020, pg. 14). But Marar's point still stands; Wyoming's allocation model is not progressive enough. Again, this is where Baker's model proves itself useful yet again. Baker's formulas go further in factoring in the increased needs of students who are disadvantaged. Later on in this paper, Baker's model will demonstrate that the Wyoming

system remains nationally viable even when increased need is addressed. At the onset of dissecting Wyoming's system, Baker's method for determining cost already presents itself as a way to enhance the system for country wide use and address the problem of allocation.

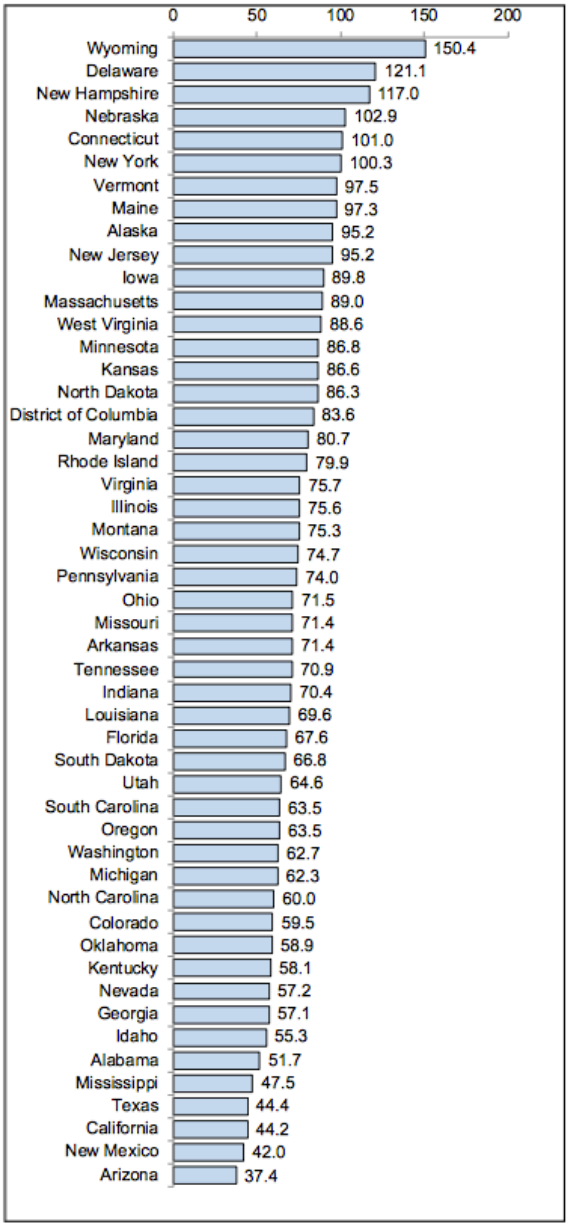


FIGURE 7

Adequacy of state education spending on highest poverty districts

Current spending as a percentage of predicted spending required to achieve national average test scores, highest poverty districts, by state, 2017

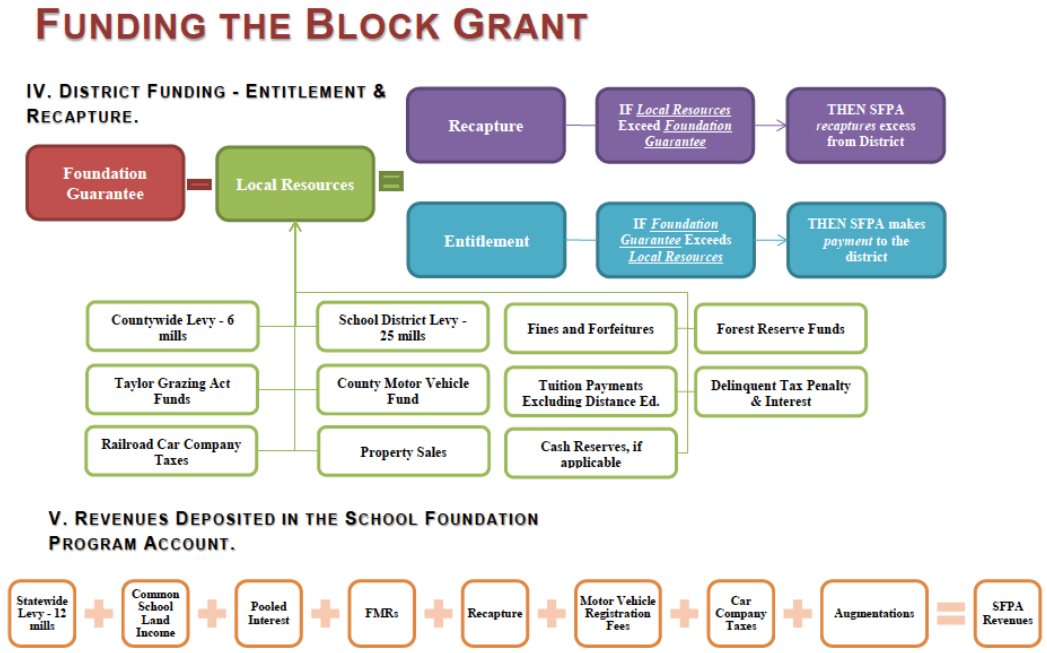
Notes: Highest poverty districts are those in the fifth quintile (i.e., the top 20 percent highest poverty districts in each state). Estimates from the National Education Cost Model (NECM), part of our State Indicators Database.

Variables used:
necm_predcost_q5
necm_ppcstot_q5

States with values close to (or greater than) 100% are those in which spending on the highest poverty districts approaches (or exceeds) a level adequate to achieve national average test scores.

(Baker, Carlo, et al., 2020, pg. 8)

The Wyoming model's promise comes in its reliance on the already well-established property tax system; it can be added on top of the current system without changing too much about the taxes individuals pay. Currently in Wyoming, once revenue entitlement is calculated using their formula, each district must tax $25 for every $1000 in assessed local property wealth, and each county has to tax $6 for every $1000 of assessed property wealth. This county tax is distributed to each school district in the county in proportion to its student enrollment. These specific numbers seem to work well for Wyoming, but are easily adjusted should a different state afford more or less tax revenue, or rely on a widely different tax-code, in implementing a Wyoming type system. This also eliminates further complications, like Texas' "hold harmless" provision, that just end up wasting money and limiting funding (Turner et al., 2016). The key thing is the "recapture" of local tax dollars. The rest of the system remains as simple. These collected taxes, in addition to other miscellaneous local sources like federal forest reserve revenues and railroad car company taxes, account for each district's local contribution for K-12 education. This local contribution is then subtracted from the state's estimated cost of providing education in that school district, leaving any need left to be made up by state aid . Then, the recapture of local tax revenue happens when a district's local contribution exceeds the state-determined revenue entitlement for the district. This recaptured local tax money makes up almost the entirety of the states contributed aid, which helped backfill districts that fail to raise their revenue entitlements through local contributions alone (Marar, 2020).



(Nickerson, 2013)

What is uniquely clever about Wyoming's system is, in line with typically higher property values and family funding contributions, it allows wealthier districts to maintain a funding advantage. The state permits school districts to raise some excess revenue that is not considered part of the state aid formula and is therefore not subject to recapture. However, Marar elaborates "these additional revenues can only be levied for specific purposes, sometimes require voter approval, and account for a relatively minuscule revenue segment when compared to the extra local revenue school districts in other states can retain." The details are such according to Marar: "Wyoming districts may levy up to $2 for every $1,000 in local property wealth to pay for recreational facilities, 50 cents for every $1,000 for cooperative education services, and an additional tax for paying down debt, whereby they're only permitted to carry debt valued at up to 10 percent of their total local assessed property wealth. Additional mills that can be levied with voter approval

include $2.50 for every $1,000 for adult or vocational education, and levies for purchasing land or building, renovating or maintaining school buildings." Again, while these specific numbers are informative, they can be adjusted based on the needs of the implementer. The important takeaway is the effectiveness of such a system. By strict design, no school district is able to raise a significant amount of revenue in excess of their state-determined entitlement regardless of the district's property tax rate, their property wealth levels, or their access to other advantages relative to their district. Still, the advantage does still exist, and the system allows some districts to still maintain a sought after competitive advantage while redistributing enough funding to fund all school districts to a relatively equal playing field.

Adapting the Wyoming System for Nationwide Use

Before diving into a detailed explanation of nationwide implementation, it is important we understand on at least a simple level what the "Wyoming System" would look like adapted for general application. This breakdown is not definitive, and should be only used to get a simplistic grasp of the system before this paper explains it in diving into the complicated details of implementation and viability. For clarity and simplicity, what follows is a step by step straightforward rundown of what a modified version of Wyoming's Local Funding Recapture System would look like nationally implemented:

1. Use current extensive school data to produce a comprehensive per-pupil cost model. The model considers different factors that affect student need, like disability or poverty, and determines the cost of educating different students to specific education quality targets. Wyoming has created such a model for their state, Baker has created an

even more precise model applicable to every district in the country. Currently, this paper relies upon Baker's model. Recent significant increases in school funding data transparency have made a model like Baker's possible, a recent development in the United States.

2. Determine a minimum standard of education to target (Baker targets the current national average), which allows revenue entitlements to be calculated for each school district. Revenue entitlement, based on enrollment data, is how much it costs for each school district to reach the determined quality targets for their students. This again relies on a model like Baker's to assign student costs, to student outcomes, for different types of students.

3. Set a standard way of raising local recapture eligible funding, taking note of how a state's districts current raise local funds. In Wyoming that was done, for the most part, by taxing $25 for every $1,000 in assessed local property wealth, and taxing $6 for every $1,000 of assessed property wealth (Marar, 2020).

4. As is the case in Wyoming, states should allow districts specific ways to raise funds not eligible for recapture. In Wyoming, "these additional revenues can only be levied for specific purposes, sometimes require voter approval, and account for a relatively minuscule revenue segment when compared to the extra local revenue school districts in other states can retain" explains Marar.

5. Calculate each district's local funds in excess of revenue entitlement (the case for more better endowed districts), and gaps to achieve that entitlement with local funds (the case for less endowed districts). That means taking recapture eligible local funds raised, and subtracting funding entitlement from that. A positive number would mean excess

funding is available, a negative number would mean a funding gap is present in the district.

6. Progressively recapture a portion of the excess local funding from districts with excess funding (districts with more excess funding will have marginally more funds recaptured then districts with less excessive local funding). Only excess funds are available for recapture. States should try to keep local recapture to a minimum, but many will need to recapture up to 25% of excess local funds. Even at 25%, only the most well-endowed districts will see even a noticeable amount of funds recaptured. Most districts will not have a significant amount of excess funds to recapture.

7. Progressively distribute the recaptured excess funds to close funding gaps in districts that cannot meet funding targets. Once recaptured funds have been distributed, state and federal aid can be used to eliminate funding caps for districts who need additional aid to meet targets.

Applying the Wyoming System Nationwide

The unique qualities of Wyoming as a state, notably its small uniform population, are sure to raise concerns about its validity as a model. But in breaking down Wyoming into precise that eliminates the effects a small uniform population might have on schooling, the data shows Wyoming to be a more then viable model. It may be the "Wyoming system" because they were the first to implement it, but the system is not fiscally contingent on anything Wyoming has that other states do not. In its purest form, it depends on student costs and government resources to pay those costs. Only in the last couple of years has there been enough education funding data to accurately calculate

those student costs, which explains not only why Baker's comprehensive data-research on school costs per district has only come about in the last year, but the lone cumulative data-set (Baker, 2018, p. 206). By finding the costs of educating every student equitably and fairly in a state, those costs can be proportionally weighed with a state's available resources. A state like New York or Illinois does indeed have a much bigger, and more diverse, student population compared to Wyoming, but that will be reflected in their calculated student costs. What this section will demonstrate is that New York, Illinois, and most other states can afford to pay those student costs, using the amount of resources available to them in the state, by utilizing a refined version of the system Wyoming currently employs.

In order to find out if the Wyoming education funding system is viable nationally, we must calculate equitable school funding costs for every district in the country. As mentioned earlier, within Bruce Baker's model for finding funding gaps exists a component to find the 2020 cost target per pupil for every student in every district across the country. These cost targets are arrived at taking into account a diverse number of key factors, with an emphasis on additional resources for those who will need them:

DV = Current Spending per Pupil	Instrumental Variables Estimates[5]	
	coef	**se**
Combined Grades 3-8 Reading & Math Outcome Index (ln)[1]	11.058***	1.684
Student Demographics		
Adjusted Census Poverty Rate[2]	3.414***	0.450
Adj. Census Poverty Rate x Population Density	0.112**	0.046
Education Comparable Wage Index[3]	0.799***	0.065
Grade Range Enrollment Distribution		
% in pre-Kindergarten	-0.264	0.166
% in Kindergarten	0.160	0.311
% in Grades 1 to 5 (baseline)		
% in Grades 6 to 8	-2.516***	0.331
% in Grades 9 to 12	-0.667***	0.154
Economies of Scale (District Enrollment)		
<100	0.209	0.367
101 to 300	0.312***	0.063
301 to 600	0.273***	0.044
601 to 1,200	0.163***	0.039
1,201 to 1,500	0.119**	0.049
1,500 to 2,000	0.147***	0.054
>2,000 (baseline)		
Population Density	-0.064***	0.018
<100 x Population Density	0.057	0.089
101 to 300 x Population Density	-0.005	0.014
301 to 600 x Population Density	-0.016*	0.009
601 to 1,200 x Population Density	-0.011	0.007
1,201 to 1,500 x Population Density	-0.010	0.009
1,500 to 2,000 x Population Density	-0.016	0.010
Unified K-12 School District (Yes = 1)	0.103***	0.031
Efficiency Factors		
State & Federal Aid % of Revenue (Public Monitoring)	0.175**	0.075
Herfindahl Index[4] (Competition)	-0.112***	0.037
% Population 5 to 17 yrs Old (Public Monitoring)	-0.247*	0.138
Year (2009 = Baseline)		
year==2010	-0.075***	0.014
year==2011	-0.130***	0.021
year==2012	-0.149***	0.023
year==2013	-0.168***	0.026
year==2014	-0.081***	0.016
year==2015	-0.084***	0.016
Constant	-52.636***	9.388
Number of observations	80,670	

note: *** p<0.01, ** p<0.05, * p<0.1

(B. Baker, Farrie, et al., 2018, p. 17)

[1] Nationally referenced (NAEP equivalents) state math and reading outcomes averaged across grade levels (natural log). Data source: https://stacks.stanford.edu/file/druid:db586ns4974/district%20means%20national-referenced%20by%20year%20grade%20subject%20(long%20file)_v1_1.dta

[2] Using Poverty Adjustment Factor x Census Poverty, based on: Baker, B. D., Taylor, L., Levin, J., Chambers, J., & Blankenship, C. (2013). Adjusted Poverty Measures and the Distribution of Title I Aid: Does Title I Really Make the Rich States Richer?. Education, 8(3), 394- 417.

[3] from: http://bush.tamu.edu/research/faculty/taylor_CWI/

[4] Herfindahl Index: Commonly used measure of market concentration, indicating competition. Estimated in Stata v. 14 (via hhi5 module: http://fmwww.bc.edu/RePEc/bocode/h/hhi5.hlp) using labor market (as per Taylor ECWI) as regional market and district enrollment shares among districts sharing each labor market.

[5] Diagnostic Notes: Partial F = 27.83 (p<.01) Excluded instruments Census 2000 ln of MHI & MHU of all other districts in labor market (weighted by enrollment) Hansen J (test for over-identification) = 0.002 (p-value=0.9612)

The thought process behind Baker's cost model is covered extensively over 32 pages (Baker, 2020). The model, as Century Foundation proclaims, is "a first-of-its-kind national cost model study. Our model estimates what it would cost for students to achieve national average outcomes on reading and math assessments by 2021 for every school district in the country, more than 13,000 in total" (Baker et al., 2020). The study takes "advantage of two recently released national data panels, applying methods used previously for inter-district, within state analyses of the costs of meeting common standards" (B. Baker, Farrie, et al., 2018). His comprehensive model addresses underfunding for disabled students, English language learners, students in foster care and at risk students to name a few. Beyond that, he has done extensive work to attempt to eliminate racial and class biases in how his model determines funding. For this paper's purposes, Baker's work will be invaluable in not only determining who is currently falling behind, but also who is far ahead. In knowing what funding is inefficient in its excess, we know what excess funding is available to be recaptured to school districts in need without requiring more spending within the system than currently exists.

Part of proving that a Wyoming system is viable nationwide means proving that there subsists a large amount of excess funding in districts that could be recaptured, and more effectively used, in districts that are nowhere near the funding levels needed for national average test scores. Using Baker's model, suggests that implementing Wyoming's system will not require significant additional costs, if any additional cost, for most states. Baker's analysis began with figuring out the resources it took to get a student to national average test scores in state math and reading outcomes averaged across grade levels, and the factors that affected that outcome (B. Baker, Farrie, et al., 2018, p. 17).

Using that information, Baker was able to determine the per-pupil cost needed to get the students of each district to national average outcomes. From there, Baker focused on showing which districts were underfunding their students. While that information is integral to the argument at hand, the strongest indication that a Wyoming system is viable lies in proving that there does exist a large amount of excess funding that could be used to help districts in need.

That does not mean that districts do not deserve the right to reasonably fund their schools in excess of other districts, but, as was confirmed in a 2017 OECD world study (OECD, 2017, p. 56), there is a diminishing marginal utility to dollars spent on schooling. There is a point where the good a district's money would do elsewhere, like replacing history textbooks that are 30 years old, far outweighs what excess resources it could be spent on within the district. In allowing every pupil access to a fair amount of resources, some states will have to recapture a bigger percent of the excess money than others, while others will have to possibly raise taxes to meet that fair standard for student resources.

Baker determined the fair amount of resources per pupil to be the one that gets them to the 2017 national average. For some, with the state of the American education system, and most of its students, it seems immoral to not want to do better. For others, raising the prospects of nearly half of the United States students appears a high bar. This paper will rely upon Baker's national average goal because, as he says, it appears to him as a compromise between efforts that seem conservative, and efforts that seem aggressive (Baker et al., 2020). To show that there is enough funding available for the Wyoming system at this standard would prove that the United States has the capacity to take a significant step forward in improving their education system.

Wyoming is the least populous state in the country and has no large cities relative to the rest of the United States. However, in a per-pupil model, neither Wyoming's lack of people nor its lack of cities is of significant importance. In every state, every student is accounted for relative to their needs in a per-pupil system. The simplicity of their system, and its flexibility, means it is designed in a way where it can only work in Wyoming. The Wyoming method of allocation, combined with a funding determination similar to Bakers, circumstantially allocates funding to each student appropriately whether they live in Afton, Wyoming or Chicago, Illinois. The differences between students living in either situation are taken into account. Then the numbers, as they are presented, are relative to each state and take into account factors such as population and demographics. While it may have taken circumstances as unique as Wyoming's to implement a system as groundbreaking as theirs, it certainly does not take away from its viability for the rest of the United States. As was pointed out before the states surrounding Wyoming share a lot of characteristics, yet it is only Wyoming who chose to utilize such a system, and as a result employ the most equitable education system in the country.

Using Baker's data on district costs per pupil, pupil enrollments, and costs to achieve national averages for every pupil, total excess funding per state after addressing funding gaps was calculated using the following methods. First, using the data provided, the funding excess for over 5000 districts was calculated by subtracting the 2020 cost target per pupil from the current spending per pupil in 2017. This was then multiplied by the enrollment in 2017 to get the total funding excess in the district. With these values in hand, along with the funding gaps data previously calculated by Baker, the total excess funding available after addressing funding gaps could be calculated for each state. This is

the amount of money left over if states were to simply take all the excess funds and apply what they needed so every district in the state has the resources to meet national averages like in Wyoming. This was calculated by going through each state and subtracting all the district funding gaps from the district funding excesses. Also calculated for each state for this paper were the total excess funding from districts with no funding gap, the total additional funding required for districts with a funding gap and the total funding gap as a percentage of total excess funding available. Each makes it easier to show how much effort each state will need to put into addressing funding gaps with the excess funding that already exists. The results of these calculations are presented in the table below:

State*	Total Funding Excess from Districts with No Funding Gap	Total Additional Funding Required to Close Gaps for Districts with a Funding Gap	Total Funding Gap as a Percentage of Total Excess Funding Available	Total Excess Funding Available after Addressing Funding Gap**
New York	$18,371,355,226.92	$427,538,637.59	2.33%	$17,943,816,589.32
New Jersey	$7,892,670,767.67	$1,283,354,385.95	16.26%	$6,609,316,381.73
Pennsylvania	$7,183,257,561.26	$2,486,638,786.17	34.62%	$4,696,618,775.08
Connecticut	$3,644,186,482.20	$555,336,406.00	15.24%	$3,088,850,076.20
Massachusetts	$4,229,894,861.71	$1,327,033,133.63	31.37%	$2,902,861,728.08
Illinois	$6,786,593,304.94	$4,019,469,425.58	59.23%	$2,767,123,879.36
Maryland	$2,722,108,854.90	$450,032,875.00	16.53%	$2,272,075,979.90
Minnesota	$1,867,064,547.66	$679,218,652.75	36.38%	$1,187,845,894.91
New Hampshire	$1,103,321,234.16	$47,414,014.79	4.30%	$1,055,907,219.37
Ohio	$3,405,244,322.28	$2,405,814,650.13	70.65%	$999,429,672.15
Virginia	$2,061,089,173.22	$1,275,083,732.05	61.86%	$786,005,441.17
Wyoming	$642,918,589.30	$0.00	0.00%	$642,918,589.30
Alaska	$682,366,808.10	$40,354,467.87	5.91%	$642,012,340.24

Nebraska	$775,961,622.35	$170,788,723.48	22.01%	$605,172,898.87
Wisconsin	$1,653,891,124.64	$1,177,893,475.04	71.22%	$475,997,649.60
North Dakota	$406,818,970.07	$35,620,286.37	8.76%	$371,198,683.70
Maine	$429,845,970.81	$72,223,149.24	16.80%	$357,622,821.57
Rhode Island	$599,468,412.16	$297,694,680.00	49.66%	$301,773,732.16
Iowa	$840,680,932.54	$544,857,908.94	64.81%	$295,823,023.60
Kansas	$885,185,585.38	$611,772,505.84	69.11%	$273,413,079.54
Delaware	$262,219,279.42	$26,742,407.85	10.20%	$235,476,871.57
Vermont	$336,227,661.21	$112,775,586.82	33.54%	$223,452,074.39
West Virginia	$256,178,073.91	$199,026,335.00	77.69%	$57,151,738.91
Montana	$218,842,548.92	$189,943,833.14	86.79%	$28,898,715.78
South Dakota	$114,081,410.36	$118,706,712.85	104.05%	-$4,625,302.50
Missouri	$1,308,116,235.72	$1,636,698,938.93	125.12%	-$328,582,703.21
Michigan	$2,160,188,520.33	$2,866,790,051.26	132.71%	-$706,601,530.93
Idaho	$26,862,002.27	$812,509,389.54	3024.75%	-$785,647,387.28
Washington	$1,108,849,620.42	$2,087,840,740.95	188.29%	-$978,991,120.53
Kentucky	$278,163,874.25	$1,309,127,548.66	470.63%	-$1,030,963,674.40
Tennessee	$352,034,865.50	$1,448,636,781.55	411.50%	-$1,096,601,916.05
Utah	$48,215,407.93	$1,165,403,225.88	2417.08%	-$1,117,187,817.94
Louisiana	$252,960,968.53	$1,464,459,001.97	578.93%	-$1,211,498,033.44
South Carolina	$339,729,029.81	$1,572,141,198.25	462.76%	-$1,232,412,168.44
Oregon	$178,713,307.25	$1,462,034,977.89	818.09%	-$1,283,321,670.64
Arkansas	$73,717,126.44	$1,618,228,588.86	2195.19%	-$1,544,511,462.42
Indiana	$782,459,247.76	$2,637,158,482.86	337.03%	-$1,854,699,235.10
New Mexico	$16,463,393.35	$1,903,512,113.71	11562.09%	-$1,887,048,720.36
Colorado	$521,011,697.61	$2,446,929,413.50	469.65%	-$1,925,917,715.89
Mississippi	$63,684,529.33	$2,171,362,543.63	3409.56%	-$2,107,678,014.29
Oklahoma	$175,872,226.28	$2,411,470,819.57	1371.15%	-$2,235,598,593.29
Alabama	$224,142,719.52	$2,771,300,596.00	1236.40%	-$2,547,157,876.48
Nevada	$21,380,747.84	$3,012,229,070.58	14088.51%	-$2,990,848,322.74
Georgia	$552,497,167.94	$5,198,256,881.41	940.87%	-$4,645,759,713.47
North Carolina	$68,402,767.55	$4,774,517,959.98	6980.01%	-$4,706,115,192.43

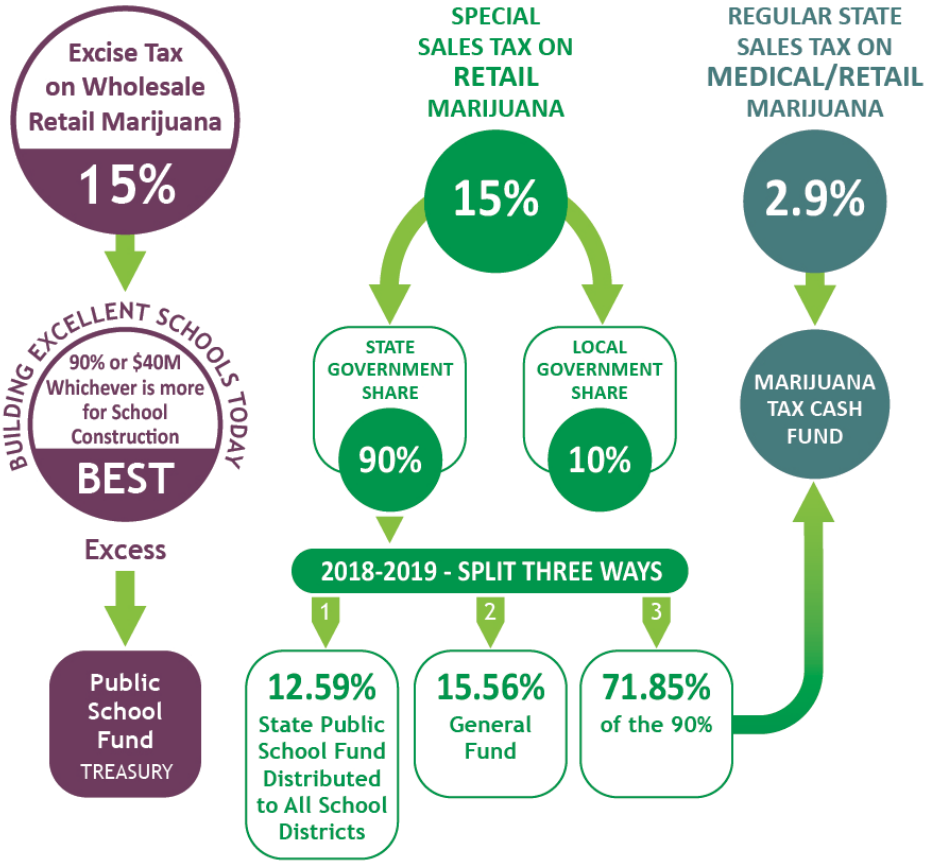
Arizona	$41,326,126.83	$6,580,384,997.71	15923.06%	-$6,539,058,870.88
Florida	$96,919,083.40	$10,909,976,042.00	11256.79%	-$10,813,056,958.60
Texas	$641,265,294.84	$30,444,508,019.44	4747.57%	-$29,803,242,724.60
California	$1,607,256,216.11	$37,515,354,659.53	2334.12%	-$35,908,098,443.43
*Data was not provided for Hawaii, as such only 49 states are listed **Negative totals represent the additional money needed to address a state funding gap for states where that applies				

(Baker et al., 2020)

As the data shows, most states can close their funding gaps with excess funds that are already available, and many can do so without recapturing, and redistributing, a significant portion of their funding. For twelve states, if they were to eliminate any funding gaps, they would need to recapture only 25% or less of their of excess funds, leaving 75% of excess funds intact for districts that raised them. For another five states, fixing funding gaps would require less than 50% of the excess funds. Another six states could fix all their district funding gaps with a recapture of less than 75% of their excess funding. After that, another two states could successfully close every district funding gap by redistributing nearly all excess funding. That means 25 states, half of the states in the United States, could completely address district-funding gaps within their states with recaptured excess funding. However, for nearly half of these states, doing so would require a significant redistribution of funding sure to be both unpopular, and extensively damaging to districts used to this excess funding. In most of these states, the good done by this recapture may not be enough to outweigh the effects this will have on school districts already operating successfully. Keep in mind only 25 states have been discussed, the other half of United States' states require more than a full recapture to completely address funding gaps.

Most states will have to increase their education budget to fully address funding gaps, but for nearly every state, that requires only a reasonably small shift in their budget. Considering the stakes of education, it would seem logical to make public education a state funding priority. Of course, as has been demonstrated countlessly throughout the paper, almost no state really does. This paper relies on Baker's definition of state fiscal effort, one in which he chooses to use gross state product as his basis for measurement. Baker explains that "in the simplest terms" gross state product conveys how much money a state has that could be taxed and put towards schools (Baker, Carlo, et al., 2020, p. 8). His decision to use gross state product is unique to his study, but he does so reasonably: "in other analyses, effort has been measured by dividing total education spending by total state and local spending. We believe this is problematic, however, because some states choose not to levy sufficient taxes to support any high-quality public services. These states may expend a large proportion of their total governmental spending on schools, but their effort compared to their capacity to spend is still low" (Baker, Carlo, et al., 2020, p. 8). Effort percentages are also available as a percentage of aggregate taxpayer income, but the results are nearly the same with a .90 correlation between the two, as both essentially represent the local and state resources available to the state in funding education. Wyoming proves a great example of why to use gross state product in measuring effort. Wyoming, recognizing the value of the resources available to them and the value of education, decided to use a significant amount of their federal mineral royalties to fund education (Nickerson, 2013). Some states, such as Colorado as seen in the diagram below, have found additional funding in taxing Marijuana to fund public

schools (CDE, 2019). By using gross state product, it frames the problem not in terms of what states are currently doing to fund education, but what they could be doing.



(CDE, 2019)

Baker's analysis reveals a nationwide lack of effort, but that is not entirely bad; as a result, it would take only a marginally small increase in effort for most states to reach a level of effort practical for funding quality education. In using gross state product, an increase in effort is equivalent to an increase in resource utilization. Imagine each state's gross state product is one giant pie. These states would have to increase the size of the slice they used for education, taking that increase from pie they have already collected

from taxes, from other resources like marijuana sale fees, or from the pie that is currently being utilized by other government programs. Using 5 percent of states gross state product means using 5 percent of the available taxed, or taxable resources for education. In 2016, only Vermont and Wyoming had education make up over 5 percent of their gross state product. By 2017, only Vermont remains over 5 percent. Still, most states in 2017 are not far off from that 5 percent goal. To reach 5 percent, 43 states would only need to shift their budget less then 2 percent; in pie terms they need to find only less than two hundredths of the pie to designate for education. Nevada, Florida, Colorado, Indiana, Tennessee, Delaware, North Carolina and Arizona are the outliers, but none of these low effort states would have to shift more than 2.5 percent to hit the key 5 percent mark.

Their most common concern in taking a system born in a state as unique as Wyoming, and applying it to the wide-ranging and varied other states that make up the United States, is the various distinctive funding advantages Wyoming has. As previously mentioned, Wyoming's education is partly subsidized by the lucrative federal mineral royalties they receive from fossil fuel companies (Nickerson, 2013). Wyoming also enjoys the tax dollars of a significant share of billionaires who call the state home, who pay taxes without requiring much from the state's public education system (Cottier, 2019). But these funding sources are not ignored in the measures of effort Baker provides; in fact, they are very well reflected in Wyoming's second ranking current fiscal effort of 4.74 percent. The reason for using gross state product as a measure is to take in account all possible funding sources for education. Wyoming is exemplary because they chose to take a significant slice of the funding sources available to them to fund education. What this paper hopes to show using Wyoming is that with an effective

system, and resolute effort, school funding can be allocated equitably and reasonably in America. Each state's 5 percent effort will look very different, but being a percentage, the resources for each state to get to that number must exist, and exist in proportion to their individual ability to fund. In redistributing the pie some states may need to get creative, pulling from mostly individual taxes, or from sources that would spur less political uproar; but as illustrated before, investments in education prove not only popular, but practical.

New York, the state that was least in need of further state investment, actually very recently made these type of significant investments in their education. Baker's model estimates that New York only need to redistribute an additional $427,538,637.59 to close funding gaps in underfunded districts, but in complying with a 2007 court mandated effort to equalize school funding New York has decided to increase education spending 3 billion for the 2021-2022 school year. Current public funding plans indicate that 75 percent of funding will go towards high-need districts (WROC, 2021). While nothing indicates for certain that these funds will be allocated as equitably as a per-pupil model can, it does show that states are willing to make these significant, but proportionately small, increases in education funding.

The 5 percent mark proves practical not only because it represents a small increase, but also because its small increase remains key in allowing almost every state to implement Wyoming's education funding system. With these new funding levels, almost half of the United States, twenty-three states, can completely eliminate funding gaps by recapturing only 25% or less of their of excess funds. That leaves 75% of excess funds intact for districts that raised them. In addition, another 14 states can now completely

eliminate funding gaps by only recapturing less then 50% of excess local funds. Seven other states now find themselves able to eliminate all funding gaps by recapturing all excess local funds, leaving just six states unable to eliminate all funding gaps by recapture. A small increase in funding goes far in allowing states to properly fund the education of their students.

State*	State Fiscal Effort (Direct expenditures as a percentage of gross state product, by state, 2017)	Percentage Increase Necessary to Achieve 5% Effort	New Funding Available as a Result of Raising Effort to 5%	Total Spending at 5% Effort as a Percentage of Current Total Spending	Total Funding Gap as a Percentage of Total Excess Funding Available	Total Funding Gap as a Percentage of Total Excess Funding Available at 5% Effort
Wyoming	4.74%	0.26	$83,500,428	105%	0.00%	0.00%
Delaware	2.79%	2.21	$1,376,470,358	179%	10.20%	1.63%
New York	4.45%	0.55	$7,446,205,700	112%	2.33%	1.66%
New Hampshire	3.69%	1.31	$961,992,346	136%	4.30%	2.30%
North Dakota	3.26%	1.74	$767,082,174	153%	8.76%	3.03%
Alaska	4.45%	0.55	$292,106,388	112%	5.91%	4.14%
Maryland	3.48%	1.52	$5,874,774,972	144%	16.53%	5.23%
Connecticut	3.59%	1.41	$3,644,204,734	139%	15.24%	7.62%
Nebraska	3.87%	1.13	$1,137,616,349	129%	22.01%	8.93%
Maine	4.17%	0.83	$337,903,036	120%	16.80%	9.41%
Massachusetts	3.08%	1.92	$8,781,983,804	162%	31.37%	10.20%
South Dakota	3.03%	1.97	$897,446,777	165%	104.05%	11.74%
Minnesota	3.70%	1.30	$3,502,866,772	135%	36.38%	12.65%
New Jersey	4.61%	0.39	$2,028,421,678	108%	16.26%	12.94%
Virginia	3.46%	1.54	$6,888,856,885	145%	61.86%	14.25%
Iowa	3.51%	1.49	$2,374,560,009	142%	64.81%	16.95%
Illinois	3.24%	1.76	$15,879,061,314	154%	59.23%	17.73%
Pennsylvania	3.93%	1.07	$6,205,768,991	127%	34.62%	18.57%
Wisconsin	3.50%	1.50	$4,333,369,197	143%	71.22%	19.67%

West Virginia	4.04%	0.96	$709,580,366	124%	77.69%	20.61%
Washington	3.11%	1.89	$8,177,516,183	161%	188.29%	22.48%
Tennessee	2.84%	2.16	$5,824,332,578	176%	411.50%	23.45%
Kansas	3.82%	1.18	$1,560,138,466	131%	69.11%	25.02%
Ohio	3.75%	1.25	$6,137,614,546	133%	70.65%	25.21%
Montana	3.88%	1.12	$482,111,761	129%	86.79%	27.10%
Rhode Island	4.22%	0.78	$383,889,983	118%	49.66%	30.27%
Missouri	3.42%	1.58	$4,093,178,439	146%	125.12%	30.30%
Indiana	2.85%	2.15	$7,465,011,515	175%	337.03%	31.98%
Michigan	3.45%	1.55	$6,255,948,696	145%	132.71%	34.06%
Colorado	2.90%	2.10	$6,318,283,981	172%	469.65%	35.78%
Louisiana	3.28%	1.72	$3,757,194,296	152%	578.93%	36.52%
Vermont	5.13%	-0.13	-$30,810,911	97%	33.54%	36.93%
Oregon	3.21%	1.79	$3,418,428,776	156%	818.09%	40.64%
North Carolina	2.72%	2.28	$10,965,646,606	184%	6980.01%	43.27%
Utah	3.09%	1.91	$2,543,883,114	162%	2417.08%	44.96%
Kentucky	3.62%	1.38	$2,606,085,401	138%	470.63%	45.39%
Idaho	3.07%	1.93	$1,354,839,757	163%	3024.75%	58.80%
Florida	2.93%	2.07	$18,440,689,156	171%	11256.79%	58.85%
Georgia	3.58%	1.42	$7,054,753,976	140%	940.87%	68.33%
Oklahoma	3.05%	1.95	$3,323,891,491	164%	1371.15%	68.90%
California	3.04%	1.96	$44,421,891,583	164%	2334.12%	81.50%
South Carolina	4.17%	0.83	$1,553,206,395	120%	462.76%	83.05%
Arizona	2.58%	2.42	$6,879,082,969	194%	15923.06%	95.09%
Nevada	2.96%	2.04	$2,870,312,879	169%	14088.51%	104.17%
Alabama	3.72%	1.28	$2,383,129,758	134%	1236.40%	106.29%
Texas	3.33%	1.67	$24,123,649,912	150%	4747.57%	122.93%
Arkansas	4.11%	0.89	$965,367,775	122%	2195.19%	155.74%
New Mexico	3.82%	1.18	$969,077,340	131%	11562.09%	193.14%
Mississippi	4.14%	0.86	$821,337,180	121%	3409.56%	245.35%

*Data was not provided for Hawaii, as such only 49 states are listed
Calculations composited from Baker's data on the 13,000+ school districts in the United States

District specific calculations made using Baker's data were too numerous to include in this paper, but are available upon request of the author

(Baker et al., 2020)

For most states an education spending increase would require an education exemption to bypass state constitutional tax and expenditure limits; luckily such exemptions are popular and common. As of 2020, "33 states had at least one kind of TEL, including those states requiring a supermajority vote of the legislature to raise new taxes or revenues" explains the Tax Policy Center. But the Tax Policy Center contends of all tax limitations, it is Colorado's original implementation of a tax rule termed "TABOR" that is the "strictest" of tax limitations. Economic Policy Institute scholars Kim S. Reuben and Therese J. McGuire agree: "with the passage of the TABOR law in November 1992, Colorado voters passed the most restrictive measure yet." But as Cody Kallen of the American Enterprise notes, "in 2000, voters approved Amendment 23, which created an exemption for education spending and the state education fund by exempting these appropriations from any statutory or constitutional limitations" (p. 11) Before Amendment 23 the increase called for here would certainly not be possible in Colorado, but it appears in implementing TABOR, voters in Colorado came to regret its ability to impact education spending. This sentiment can be found throughout the country: in studying nationwide tax limitations Kallen found the education "funding category is often carved out of expenditure limits" (p. 5). This is only in line with what public opinion polls have indicated. As illustrated before earlier, public opinion polls indicate that Americans believe in increased spending for education. While these increases would require an exemption for education funding for states that have not done

so already, both polling and its commonality show widespread exemptions are politically viable.

Pressure from the federal government would only help further push improvements. If the federal government hopes to improve education, and ensure that each state is doing its fair share, it should institute a state effort requirement in order to receive federal funding. While five percent of gross state product serves well to show the viability of a nationally implemented Wyoming system, it is not definitively the number that should be used. Clearly some states, particularly the top states in the table above, seem to be adequately funding their state's education at its current effort and would only have to change how it is allocated. But for most states, a bar set around that five percent number represents something not only achievable, but urgently and desperately necessary.

III. Addressing: The State and Federal Role

An increase in efforts means an increase in responsibilities, and in funding this effort it must be decided who takes on these responsibilities. In the current system, certainly local districts have a duty to fund their schools, but it is not so clear how much of the responsibility they should take on, and how involved the state should be. Beyond the state, the federal government is also responsible for funding public education. Currently, it takes on little responsibility in funding education, something that makes little sense when an investment in education is one of the most important investments a country can make in not only their future prosperity, but their global standing. For many of the states that cannot afford to adequately fund their own education, federal aid

remains the only means to which they can properly educate their students. If the federal government hopes to uplift states that cannot afford an adequate education for their youngest citizens, so that one day they can, an investment in that state's education seems like one of the best ways to do that. If the federal government decides to invest heavily in education, leveling the playing field to an adequate one for every state, they build the groundwork for a self-sustaining system where students graduate ready to utilize the ways they have grown and learned to contribute back to the world around them.

For many states adequate education cannot be provided without an increase in state effort, and while the previous section illustrated the level that would be required, it still needs to be shown how local revenue and state aid would share the responsibility of that increase. Currently, the way each state divides these responsibilities is very different. The following diagrams, courtesy of Baker's book Education Inequality and School Finance, illustrate how students from different poverty quintiles are funded in New Jersey, Massachusetts and Illinois:

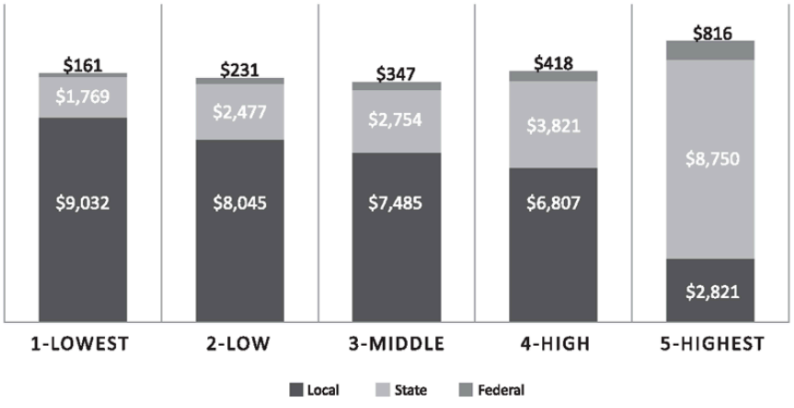


FIGURE 6.2 New Jersey revenue by source and by poverty group (quintiles), 2015

Source: Baker et al., *School Funding Fairness Data System*.

(Baker, 2018, p. 111)

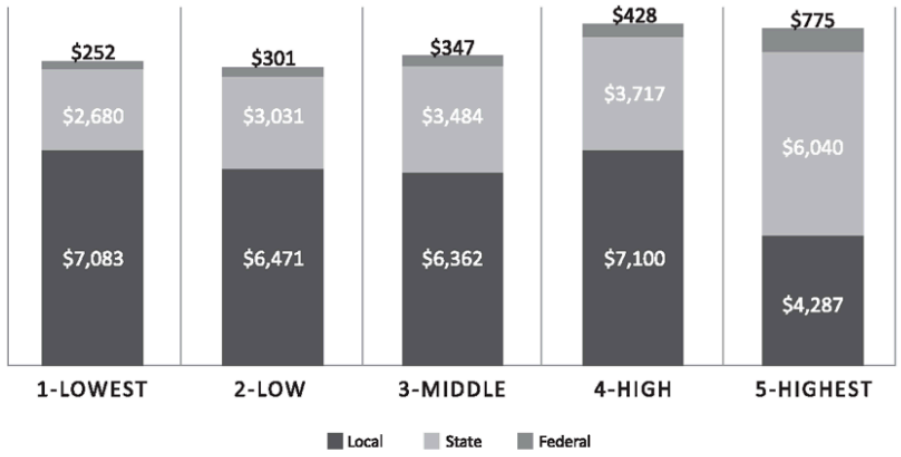


FIGURE 6.6 Massachusetts revenue by source and by poverty group (quintiles), 2015

Source: Baker et al., *School Funding Fairness Data System*.

(Baker, 2018, p. 114)

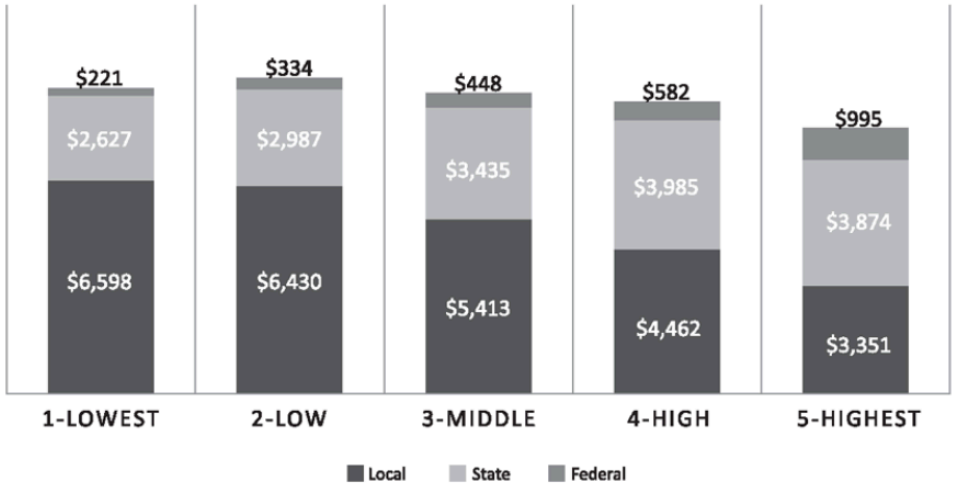


FIGURE 6.8 Illinois revenue by source and by poverty group (quintiles)

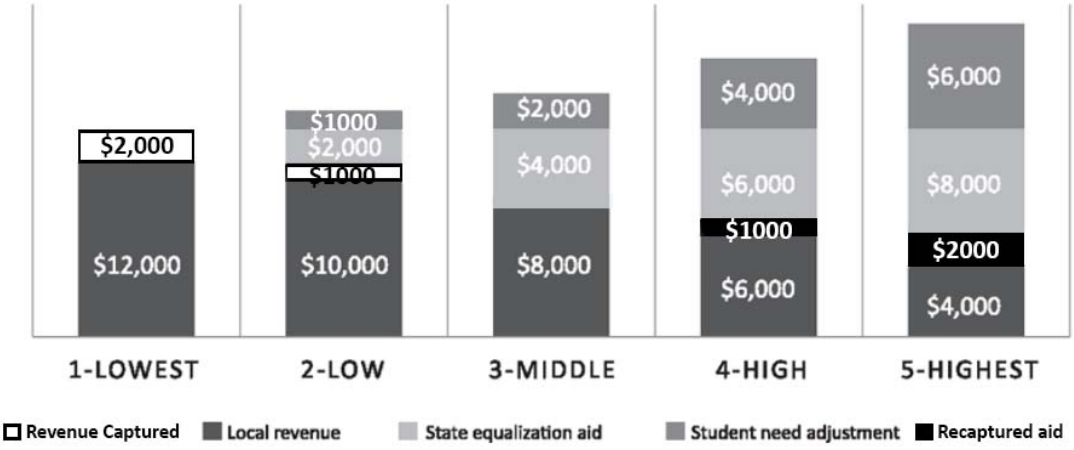
Source: Baker et al., *School Funding Fairness Data System*.

(Baker, 2018, p. 116)

It is immediately apparent that in New Jersey the students in the highest levels of poverty receive a significant amount of state aid, as do those in Massachusetts, while the highest poverty students in Illinois receive nearly the same amount of state aid as every other student demographic. As has been established previously, it is these highest poverty students that actually need the most aid; much of addressing funding gaps was providing this additional aid to those with the most need. While New Jersey's current system accomplishes this adequately, Massachusetts' system fails to get the most funding to those in the highest poverty quintile, and Illinois only manages to provide the most funding for those students who are the second least in need of it.

A truly effective state funding formula, involving the recapture and redistribution of excess funding, would produce results similar to New Jersey's current system. It would look something like this:

Figure 1 (Lowest Poverty to Highest Poverty Quintile)



(Bernard, 2021; Baker, 2018, p. 108)

In the Wyoming system, local and assessed property wealth are used to determine the amount states recapture from each district. Once collected, these captured funds are

redistributed as aid based on who needs them. A progressive funding formula such as the one above leaves local districts to fund their schools as they can, and then the state tops it off with state tax money, and recaptured funds, to make it equitable. Local districts are still responsible for funding their schools as they always have, but it is the state who is responsible for making sure everyone of their students receives any funding they need that local sources cannot afford to give them. While almost all of the time the highest poverty districts are going to be the districts who need the most aid, districts with a high amount of English Language Learners or students with disabilities may need greater amounts of funding help. The funding formula takes in a multitude of variables to calculate student need. The greater the needs of their students, the greater the funding a district will receive.

When the state cannot afford to provide the needed funding for its students most in need, or to do so would require a level of recapture beyond what would be considered an effective and fair redistribution, it is up to the federal government to make up the rest. To illustrate what this may look like, this paper will assume that recapturing anything less than 25 percent of excess education funding is considered effective and fair. If states raise their efforts to 5 percent of their gross state product, that means almost half of the United States, 23 states, will be able to afford to adequately fund their students without federal help. This represents a 22 state increase in states adequately funding their students, as before, Wyoming was the only state that was. However, this nearly nationwide increase effort leaves 26 states that require federal assistance. The level of federal assistance each state will need can be found by subtracting 25 percent of the total excess funding available for recapture, from the aggregate funding gap. This produces the following

results, with West Virginia and down representing the 26 states that require federal aid to close funding gaps:

State*	Total Funding Gap as a Percentage of Total Excess Funding Available at 5% Effort	Federal Funding Needed at a 25% Recapture Rate**
New York	1.66%	-$6,026,851,594.29
Massachusetts	10.20%	-$1,925,936,532.87
Maryland	5.23%	-$1,699,188,081.94
Illinois	17.73%	-$1,646,944,229.28
Connecticut	7.62%	-$1,266,761,398.08
New Jersey	12.94%	-$1,196,918,725.68
Virginia	14.25%	-$962,402,782.75
Pennsylvania	18.57%	-$860,617,851.91
Minnesota	12.65%	-$663,264,177.19
New Hampshire	2.30%	-$468,914,380.30
Delaware	1.63%	-$382,930,001.64
Wisconsin	19.67%	-$318,921,605.48
Nebraska	8.93%	-$307,605,769.56
Iowa	16.95%	-$258,952,326.57
North Dakota	3.03%	-$257,854,999.82
Washington	22.48%	-$233,750,710.09
Alaska	4.14%	-$203,263,831.18
Wyoming	0.00%	-$181,604,754.44
South Dakota	11.74%	-$134,175,333.99
Maine	9.41%	-$119,714,102.57
Tennessee	23.45%	-$95,455,079.52
West Virginia	20.61%	-$42,413,275.04
Kansas	25.02%	$441,492.83

Montana	27.10%	$14,705,255.54
Ohio	25.21%	$20,099,932.89
Vermont	36.93%	$36,421,399.28
Rhode Island	30.27%	$51,855,081.09
Missouri	30.30%	$286,375,270.13
Louisiana	36.52%	$461,920,185.69
Idaho	58.80%	$467,083,949.73
Utah	44.96%	$517,378,595.33
Oregon	40.64%	$562,749,457.06
Indiana	31.98%	$575,290,792.05
Kentucky	45.39%	$588,065,229.79
Colorado	35.78%	$737,105,493.68
Michigan	34.06%	$762,755,747.01
South Carolina	83.05%	$1,098,907,341.81
Arkansas	155.74%	$1,358,457,363.46
Oklahoma	68.90%	$1,536,529,890.23
New Mexico	193.14%	$1,657,126,930.24
Mississippi	245.35%	$1,950,107,116.07
North Carolina	43.27%	$2,016,005,616.43
Alabama	106.29%	$2,119,482,476.46
Nevada	104.17%	$2,289,305,663.66
Georgia	68.33%	$3,296,444,095.33
Arizona	95.09%	$4,850,282,723.74
Florida	58.85%	$6,275,573,982.14
Texas	122.93%	$24,253,279,217.54
California	81.50%	$26,008,067,709.67
Total federal aid needed:		$83,791,818,008.86
Total federal aid needed (minus Texas and California):		$33,530,471,081.65

*Data was not provided for Hawaii, as such only 49 states are listed

**Negative totals represent states that do not require additional federal aid to close funding gaps at a 25% recapture rate, while states in red (Kansas down) are those that require federal aid at that recapture rate

(Baker et al., 2020)

In order for the federal government to help close funding gaps, it would require a little under $84 billion of additional federal aid. Over half of that need for federal aid, more than $50 billion of need, comes from just two states: Texas and California. Both Texas and California require four times the amount of additional funding when compared with the next needy state, Florida. These two outliers represent a problem beyond just a need for some additional federal aid, and thus will be considered separately from the other states for now. Representing their own wicked problem, the California and Texas quagmire will be addressed later on in this section. Texas and California removed from the equation, the 24 remaining states would require around $34 billions annually in additional federal aid to close all funding gaps.

Keep in mind that the Basic Grant formula called for $50 billion in 2015 fiscal year funding to properly fund education, indicating a significant tendency to over-estimate in these past Title I formulas. Basic Grants typically make up a little less then 50 percent of Title I funding, meaning government formulas could have called for somewhere closer to $100 billion in total needed funding (Gordon, 2016). Congress of course ended up delegating much less for Title I funding, only around $15 billion, but what this shows is this paper's proposed solution finds a way to close funding gaps far more efficiently then government estimates. Part of this increase in efficiency is the wide

breadth of new data available to Baker in 2020 to craft his formulas (Baker, 2018, p. 206-207), but increased state effort remains just as much a part of the solution.

Still any increase in the tens of billions seems like an impossibly large amount of additional funding, but Elizabeth Warren's presidential campaign proposed education plan shows such a level of federal funding to be obtainable. Warren recognizes that current federal support for K-12 public education funding, provided through the Title I initiative, is just too small to properly support the system. Currently 24 states can make do with current levels of Title I funding, but clearly 26 require more help then they currently get. Title I funding as of 2019 tops out at only $15.8 billion annually, Warren insists that the United States public education system needs to contribute an additional $45 billion annually. That would be done by providing an additional $450 billion for Title I funding over the next ten years. That money, when distributed through a Wyoming system approach, would be able to close all funding gaps in 24 states, leaving nearly 10 billion for the remaining astronomical needs of Texas and California. Again, 10 billion in additional aid would be enough to solve the funding gap issues of any other combination of two states in the country, as such Texas and California are significant outliers to be addressed separately.

Now this additional federal aid, solving the funding gap issues of all but two states, is well sourced by Warren; she has a feasible plan to pay for this increase through a wealth tax. One of the biggest reasons the federal government needs to play a bigger role in education funding is because it is the federal government who has the greatest ability to redistribute massive amounts of money from those who value it's loss the least. Elizabeth Warren's wealth tax will only apply to those whose net worth is over 50

million dollars, affecting less than 0.1 percent of Americans (Breuninger, 2019). As per the tax, Households would pay an annual 2% tax on every dollar of net worth above $50 million and a 6% tax on every dollar of net worth above $1 billion (Warren, 2019b). This is not an income tax, any money earned annually is not affected, this is a tax on amassed wealth. The payoff would be enormous, the tax would generate over 3.75 trillion dollars over the next ten years (Warren, 2019b). This is to fix, what Warren finds, is a "tax system that asks the rich to pay a lot less than everyone else. According to [UC Berkeley economists] Saez and Zucman, the families in the top 0.1% are projected to owe 3.2% of their wealth in federal, state, and local taxes this year, while the bottom 99% are projected to owe 7.2%" (2019b). The tax would also be packaged with additional IRS reforms, to make it harder for those who the tax may affect to hide their wealth. These policies appear radical, but that does not mean it is necessary. While fixing education system will require not only a radical redistribution of education funding, it appears it will also require a radical redistribution of American wealth. The point of this paper is not to argue whether this redistribution is feasible, it is only to show that the funding for education does exist. But Warren's plan appears to not only be judged practical by leading economists (M. Fox, 2015), but the amount of funding it could generate to help the country invest in its future is unparalleled. In total, her plan sets aside 800 billion dollars in total over ten years for public education. The reforms proposed throughout the rest of the paper will fall well short of that total; a testimony to the feasibility of fixing the United States' most important investment, able to come in under the budget of even Warren's progressive plan.

As previously mentioned, 450 billion dollars of that 800 billion will be utilized as additional Title I funding, but in its utilization the federal government must ensure that it is being applied effectively. The progressive funding formulas proposed earlier in this section would have to be strictly adhered to. As Baker lays out, the nation adopts "the funding targets as foundation targets, then determines the state and local effort that should be put forth toward meeting those targets, and, finally, pools existing federal aid sources and allocate aid to fill remaining gaps, assuming constant effort" (Baker, 2018, p. 270). Furthermore, the government would need to work to provide even further transparency in their funding data, to allow experts like Bruce Baker to even better monitor the nations education funding. "This would ensure that both the federal government and state governments do their part to progressively and equitably fund public schools while still ensuring that no child gets less per-student funding than they do today" declares Warren (2019a).

Leading federal education spending scholar Nora Gordon outlines the specific necessary changes to better allocate Title I funding, reinforcing and particularizing what has been proposed above. She sums up her first of two proposals as "refocusing federal outlays on our neediest students through formula reform" (p. 10). Her first reform calls for the eliminations of Concentration and Education Incentive Grants, leaving only Basic Grants and Targeted Grants (p. 14). She calls for Basic Grant eligibility grant requirements to change so "only school districts with at least 5 percent of children in poverty are eligible, as opposed to the current formula that permits districts with at least 2 percent of children in poverty or ten poor children to collect funds. The national child

poverty rate in 2014 was 22 percent, and the median school district had 19 percent of children eligible for Title I, so this change is quite modest" (p. 14). Part of these changes also include "emphasis on poverty rates, instead of poverty counts, to allocate funds" (p. 14). This is in accordance with figure 1, with only the lowest poverty districts not receiving any federal aid. As per the proposal in this paper, funding would be allocated per pupil with a progressive formula similar in detail to Baker's, contributing the amount to eliminate funding gaps per-pupil after a state's expected contribution (generally proposed here as 5% of gross state product).

Gordon proposes using Targeted Grants to further target poverty with funds free-up from eliminating the other two grants, but with reliance on a formula like Baker's, state's and district's federal need can be more effectively and efficiently targeted with just the Basic Grants. By making all grants targeted, the federal government only spends where it needs to in providing Title I funding. Again, targeting poverty was the original aim of Title I, and its purpose should remain that simple to avoid complication. Further federal spending should be delegated to other programs and proposals. If the state feels the need to contribute beyond its expected contribution, the formula's should not be altered to deter further federal investment, but should keep federal funding as if the state is contributing at expected levels.

Gordon's other proposals are satisfied in just using one formula based grant, but the last step of her proposal proves an imported added step: phasing in changes using a four year plan. She calls to:

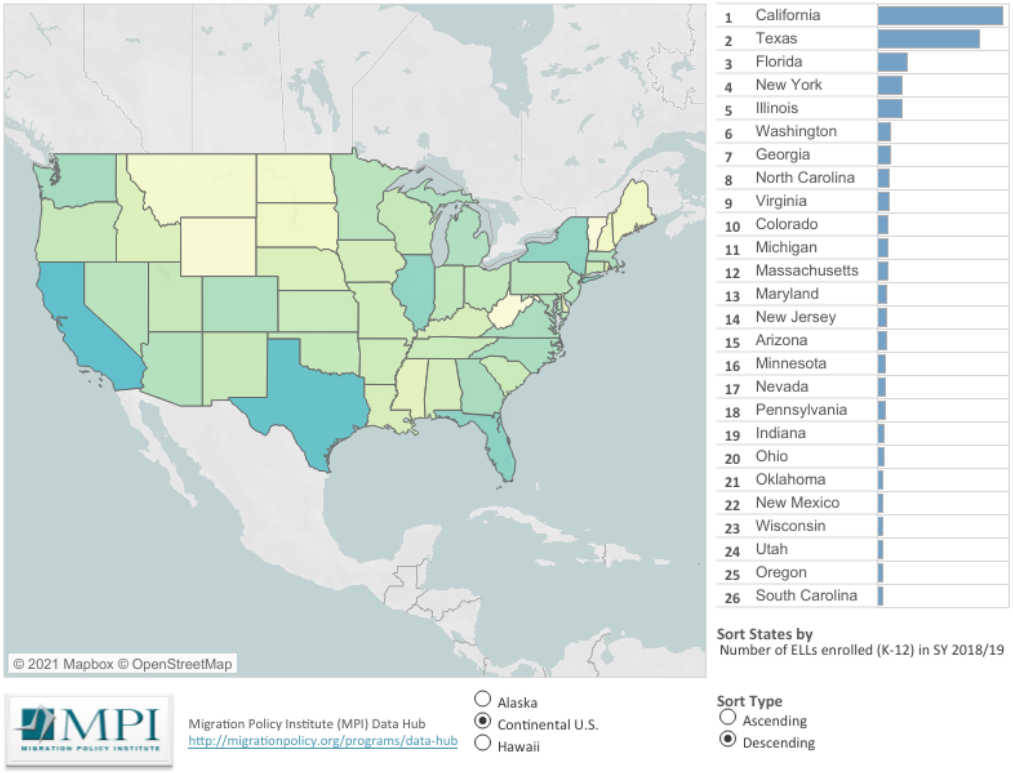
> hold districts harmless at 80 percent (regardless of counts or rates of eligible children in the district) of FY2015 allocation levels in year one, at 50 percent in year two, and at 20 percent in year three. By year four, district allocations will be calculated using the formula, with no role for previous funding levels. (One option here would be to allow federal or state waivers for districts who present evidence of short- term demographic shocks and who expect enrollments to return) (p. 14-15).

She clarifies that she wants to "hold district- but not state- level funding harmless" (p. 15). While local spending would be eased in, state spending would be changed nearly immediately. She does not provide a reason for not easing state funding changes. The considerable changes called for in this paper at the state level do not seem something able to smoothly transition to in a year, as such states will be subject to this four year easing period as well.

What to do About Texas and California

Texas and California pose a huge problem, and to devote much more federal aid to their students than Warren's proposed plan already allots, without good reason, seems unfair to the rest of the nation. But there is a good reason their costs are so high: Texas and California take on far more English-language learners (ELLs), enrolling roughly half of all ELLs in the country. Compared to the next most enrolled state, Texas and California's enrollment is nearly five times greater.

Number of ELLs Enrolled (K-12) by U.S. State in School Year 2018/2019



State	Number of ELLs enrolled (K-12) in School Year 2018/2019	Share of ELL Students Among All Students
California	1,196,099	19.35%
Texas	966,594	18.70%
Florida	282,023	10.14%
New York	238,885	9.07%
Illinois	228,640	12.11%
Washington	128,795	11.78%
Georgia	119,610	6.96%
North Carolina	114,363	7.46%
Virginia	107,173	8.54%
Colorado	99,732	11.36%
Michigan	96,719	6.64%
Massachusetts	95,086	10.32%
Maryland	84,120	9.72%

New Jersey	83,560	6.25%
Arizona	82,211	7.34%
Minnesota	73,303	8.48%
Nevada	73,016	15.18%
Pennsylvania	68,443	3.98%
Indiana	61,523	5.94%
Ohio	56,724	3.43%
Oklahoma	54,645	8.32%
New Mexico	51,111	15.81%
Wisconsin	51,094	6.36%
Utah	50,463	7.64%
Oregon	50,050	8.60%
South Carolina	45,411	6.03%
Tennessee	45,266	4.65%
Kansas	44,144	9.29%
Connecticut	40,200	7.92%
Arkansas	38,531	8.06%
Missouri	34,353	3.90%
Iowa	31,320	6.48%
Alabama	27,702	3.84%
Kentucky	27,067	4.17%
Louisiana	25,568	3.74%
Nebraska	22,067	7.17%
Idaho	19,230	6.27%
Mississippi	14,771	3.18%
Delaware	13,164	9.66%
Rhode Island	12,523	8.91%
District of Columbia	8,531	11.28%
Maine	5,989	3.43%
South Dakota	5,975	4.42%
New Hampshire	4,992	2.87%
North Dakota	4,018	3.69%

Montana	3,457	2.36%
Wyoming	2,704	2.89%
West Virginia	2,012	0.80%
Vermont	1,753	2.23%

(Migration Policy Institute, 2013)

Texas and California have the two highest gross state products of all states, the greatest breadth of resources in which to fund their education, yet the high costs of educating so many ELL students places an unequaled burden upon their education system. In a 2014 literature review of over 70 ELL cost studies Arizona State Professors Oscar Jimenez-Castellanos and Amelia M. Topper found "universally recommended increases to per pupil base costs" for ELL students (p. 201). Those increased per pupil weighting recommendations were significant, ranging from 0.39 to 2.0 above base cost (p. 201). Baker, who did his own literature review on the subject in 2004, came to a similar conclusion, with additional funding requirements ranging from "40% and 100%" depending on the circumstances of the student (Baker, 2004, p. 9). These numbers mean that for Texas and California, where roughly 20 percent of students are designated ELL, nearly one fifth of their students require additional funding somewhere between 40% and 100% beyond the base to be properly educated (Migration Policy Institute, 2013).

Having not only more students, but magnitudes more ELL students, amplify Texas and California's costs far beyond what any other state has to take on. Using Bakers determined cost for a student of median poverty level from Texas (Baker, 2018, p. 228) and California (Baker, 2018, p. 234), it can be determined exactly how much more each state must pay to support their ELL students. Included for comparison is Florida (Baker, 2018, p. 229), who in having the third largest amount of ELL students, also requires the

third largest amount of additional federal aid behind Texas and California. Still, it bears repeating the vast scale of Texas and California's ELL student population: third ranked Florida has a fifth of the ELL students, and as such requires only a fourth of the additional federal aid that California and Texas require. The numbers below reveal the massive added costs Texas and California bare, a consequence not of their own malpractice, but of their large economies and ELL immigrant friendly geographies:

State	Base Cost of a Student at Average National Outcomes (Median Poverty Quintile)	Number of ELL Students	Additional Cost of ELL Students (Conservative additional per pupil weight of 40% additional cost)	Additional Cost of ELL Students (Median additional per pupil weight of 70% additional cost)	Additional Cost of ELL Students (Aggressive additional per pupil weight of 100% additional cost)
California	$13,122	1,196,099	$6,278,084,431.2	$10,986,647,754.6	$15,695,211,078
Texas	$12,437	966,594	$4,808,611,831.2	$8,415,070,704.6	$12,021,529,578
Florida	$11,856	282,023	$133,746,5875.2	$2,340,565,281.6	$3,343,664,688

(Baker, 2018, p. 228-234)

The enormous additional federal funding required by Texas and California makes sense, it is necessary to ease the tremendous burden their large ELL populations place on their school systems. The conservative additional costs for ELL students are more than current total education spending for 18 states. The aggressive additional cost figures are greater than current total education spending for 35 states. Just as is the case in the Florida, the aggressive additional ELL costs for both Texas and California are equal to about half of the additional federal aid needed at 25% recapture. If it seems fair to supply Florida with an additional 6 billion in additional federal aid, then considering the cost of

ELL students, it should be fair to give Texas and California the additional 24 billion and 26 billion they need. That does bring the needed additional federal aid total from roughly 34 billion to a little under 84 billion annually. But in aiding Texas and California, it needs to be thought of as more than just additional federal aid, but a direct investment in nearly half of the country's ELL students.

Removing the Limiter in Increasing Local Autonomy

While the federal and state government has the right to dictate general guidelines about how local districts and schools spend their money, in trying to micromanage the classroom from a far, they only impede the educators and local administration who know their students best. Recent Canadian reforms have propelled Canada to become one of the world's leading educators; a system that finds success in federal trust and reliance on local autonomy (NCEE, 2020). That means moving away from federal tests and mandates, where large governments decide what millions of local students need, towards a Canadian based structure where local governments tell larger governments what they need to educate the students they know best.

Devolving decisions about resource use to the school recognizes the uniqueness of each United States community, and the unique knowledge educators have of those communities. In summarizing a 1998 study by Margaret Goertz and Leanna Stiefel, Roza breaks down the logic of granting more localized power over resources. It "reflects the notion that school personnel are better equipped than district administrators to use their resources efficiently and effectively to meet student needs… When building leaders are able to make decisions, the reasoning goes, those decisions can be tailored to the unique

needs of their students, thereby resulting in more efficient, effective, and possibly innovative use of resources" (Roza, 2010, p. 81). Roza acknowledges that "freeing up resources so districts can make decisions with little state interference can be intended to produce more coherent, more efficient spending. Yet, as has been extensively discussed in this book, many districts do not distribute the flexible resources they already have equitably or strategically across schools" (p. 81). Unfortunately, just "changing the state funding structure to devolve decisions to districts leaves intact other elements of the system that confound the basic intentions of the reform" (p. 81). What is needed is a system that grants the most autonomy to those with the most precise knowledge on how to use it: schools and teachers.

A push towards a pro-autonomy system, with ample room for teacher creativity and school direction, mirrors recent successful reforms in a country especially similar to the United States: Canada. Canada currently routinely ranks among the top 10 in first-world education systems, and only seems to be improving (NCEE, 2020). As education researcher Adrienne Anderson sees it, what makes Canada's success most impressive is it comes despite being "the United States' brother to the North, with similar socio-economic disparities, government, and population" (p. 546) According to Anderson part of the United States failures, and Canada's success is in part due to Canada's lack of reliance on federally imposed testing (p. 547). But the biggest advantage Canada has over the United States is the autonomy teachers, and localities, have to tailor curriculums to the different kind of students they teach. Anderson shows throughout her paper that the Canadian government's recent success can be attributed to a decision to take a step back

and “encourage provincial collaboration and creative methods of teaching… the United States’ system is seemingly the opposite” (p. 547). She further finds that “in Canada, funding and administration in education is, in many ways, similar to that in the United States” (P. 563). Despite that Canadian “policies have allotted for the decrease in dropout rates, narrowing in the achievement gap, and low variation amongst Canadian schools” (p. 563).

In learning from Canada’s success, Anderson sees an increased dependence on collaboration and trust as some of the most necessary steps to fixing the United States’ education system. Canadian policy begins with the federal government setting a number of common objectives mostly centered around equality of opportunity for the ten Canadian provinces (p. 567)). Tasked with reaching these equality goals, each province sets to address them “by identifying the specific problems occurring in its education system;” Anderson describes it as each province tailoring their response to their province’s needs (p. 567). With the help of local research universities and experienced teachers, “each province has been able to develop policies to combat those problems with” additional aid from the federal government when needed (Anderson, 2016, p. 567). In turn, relying on cities and towns to identify their own problems and tell provinces what they will need in order to address them. This feedback comes not only from research and data from these small locales, but also from teachers and administrators. It is a sustaining and supportive chain of feedback, that focuses on finding success in autonomy, giving less weight to the importance of accountability for a diverse array of locations and circumstances. Especially in a diverse country like Canada, no two students are the same,

and who better to dictate what these differences entail than the people that live and teach among these students every day.

Implementing Canada's delegation of autonomy starts with recognizing that in education, the closer someone in the education system is to a student, the more autonomy they should have in deciding how they teach. Canada's system recognizes that students in Wyoming require different things then students in New York, and students in New York City vary from students in Westchester. The federal government can set very broad guidelines, the state can be a little more specific in how funding is used in mirroring Canadian provinces, and it is districts, schools, and especially teachers who can truly delegate. As the Canadian government has set up the autonomy for its provinces, districts, schools and teachers will be no different than how the United States will dictate autonomy for its states, districts, schools and teachers. Mirroring the Canadian structures of accountability and autonomy will require an extensive removal of current systems for accountability. In ensuring accountability, this will require extensive reforms in the way the United States employs and prepares teachers. These reforms can be found detailed in the following chapter, another necessary part of solving United States' wicked education problem.

Making State and Federal Rules and Regulations More Effective and Less Frustrating

What has made this paper possible, and what will ultimately allow its proposals to succeed, are provisions under the 2015 Every Student Succeeds Act (ESSA) to increase the transparency of school finance for every school in the nation. Gordon notes in 2016

> calculating school-level spending poses a critical data challenge for many districts and states. Prior to ESSA, this calculation was necessary for the adoption of several alternative fiscal compliance methods. Under ESSA, however, the three presumptions of supplanting which have significantly shaped state and local resource allocation over the decades are now irrelevant. States and districts must calculate school-level spending in order to meet two of ESSA's new requirements: (1) the new supplemental funds test for supplement, not supplant (ESSA 2015, at § 1118(b)(2)); and (2) reporting school-level spending to the public and the federal government (ESSA 2015, at § 1111(h)(C)(x)) (p. 11).

However, in 2020, it was the program's success that allowed Baker to undergo the most comprehensive United States school finance data analysis ever done. While what Gordon proposes happened to be before the success of ESSA's data reporting, her proposals still very much stand as necessary and needed especially when paired with the called for significant changes outlined in this paper.

Her first batch of suggestions remain crucial: "reforms to improve and disseminate information to districts, states, and auditors" (p. 11) Currently, at least as understood by the California government, Title I funds are to be "used to support effective, evidence-based educational strategies that close the achievement gap and enable the students to meet the state's challenging academic standards" (California Department of Education, 2020). Those are simplified terms, and imply a broad range of uses for Title I funding, but Gordon maintains that even in its details Title I is a lot less restrictive than most schools understand it to be. State funding is no different. So, in both, lies a problem. Currently the chain of information starts as "district-level Title I

administrators report getting their information about what's permissible through a variety of often informal communications with their SEAs. State- level Title I directors in turn rely on federal information, in statute and nonregulatory policy guidance, as do auditors, who historically have relied on the OMB A-133 circular (now replaced by the Uniform Grant Guidance)" (Gordon, 2016, p. 11). A 2003 U.S. Government Accountability Office (GAO) study found, "despite the availability of this guidance, many of the auditors and program officials we spoke with expressed confusion regarding the application of these provisions to their particular circumstances, such as schoolwide programs" (GAO, 2003). So, as Gordon found, "despite recent federal efforts to clarify the law with presentations and newer guidance, the continued presence of a robust private market for guidance suggests this confusion remains today" (p. 11). With that "school districts can adopt more- flexible fiscal compliance regimes—one of which ESSA now mandates— only if they know about them, so I begin with a set of informational efforts" (p. 11) These informational efforts serve as applicable suggestions not only to information related to Title I, but state guidelines related information as well.

Gordon calls for the Education Department to "one federal guidance document that is current, concise, comprehensive, and comprehensible" (p. 11). A big change, such as the ones advocated for in this paper, create a prime opportunity to start from fresh in constructing one comprehensive source for guidance (Gordon, 2016, p. 11). Gordon believes such a document should be subject to more than just the standard review process, "it would also be subject to extensive editing to conform to Federal Plain Language Guidelines. Most critically, SEA (State Education Administration) and LEA (Local Education Administration) personnel from a diverse set of agencies would offer

feedback throughout its development" (p. 11). This document would be a "living" one subject to the addition of clarifications with the appropriate review; new additions should not spur the creation of additional guidance documents adding to the chaos (Gordon, 2016, p. 11-12). Gordon then lays out further specifics about this documents format and presentation:

> In this document, [The Education Department] would set out the rules concisely rather than following a Frequently Asked Questions (FAQ) format; if [The Education Department] wishes to expand on these rules in applied examples, it could link to examples (e.g., the sample methods of documenting compliance via the supplemental funds test in [The Education Department]'s July 2015 schoolwide program guidance letter). The document would be prominently hosted on [The Education Department] 's Web site in easily searchable formats (i.e., HTML, exploiting hyperlinks for ease of navigation, and high-quality PDF, rather than scans of time-stamped hard copies) (p. 12).

In our current age, to not have state and federal information in the form of an easily navigated website would be to waste the tools available. Only then can educators and administration best understand the limitations of Title I and state funding in a way that encourages a wide variety of uses, instead of breeding frustration in a narrow range of "safe" utilizations.

Such new guidelines must be accompanied by a major informational campaign "enlisting constituencies and advocates at national, state, and local levels" (Gordon, 2016, p. 12). Once Education Departments release the guidance outlined above Gordon believes

> groups with close ties to state chiefs and local superintendents should take active roles in spreading awareness of the new guidance. These efforts must target not only Title I and finance administrators, but also a full range of school building and central office personnel. is broader audience is critical for disseminating the key message that Title I spending options are far broader than previously believed, and those who need funds for effective ways—not only supplemental or interventionist ways, but even "core" ways—of improving schooling for academically disadvantaged students should look to Title I as a potential source of support (p. 12).

As Gordon contends, there are additional benefits to an informational campaign: "groups promoting awareness of the new guidance could use the increased discretion that districts would have over their budgets to motivate local interest in innovative fiscal compliance" (p. 12).

For simplicity's sake, states should keep their budget reporting guidelines nearly identical to federal ones, but if they decide to differ from federal guidelines the federal Education Department should enforce states to specify any additional reporting requirements. Currently, as Gordon has found, "Section 1903(a)(1)(D) of NCLB (2002) (which has moved to ESSA 2015, at § 1603) specifies that states must tag any requirements for districts that they have added to the federal requirements" (p. 12). However, "in practice, given the informal ways states tend to communicate with their districts, [The Education Department] has not enforced this provision." States must be required to not only disclose additional reporting responsibilities, but have those clearly documented in the ways Gordon describes here. "These documents, like the federal

guidance, would be prominently hosted on SEA Web sites in searchable formats. As with the federal guidance, if states choose to link to additional materials such as Webinars, PowerPoint presentations, or FAQs, they could easily do so— but these materials should supplement the one core plain language document" explains Gordon (p. 12). Furthermore, Gordon insists "school districts must learn to push back if their SEAs tell them that federal law prohibits certain uses of funds. [The Education Department] must enforce the existing requirement for states to delineate their own rules, to help districts know when they are justified in pushing back against their SEAs" (p. 12).

Further encouraging transparency, consistency and understanding, Gordon calls for The Office of Elementary and Secondary Education to "create a public, online, searchable database of all official correspondence from [The Education Department] to SEAs and LEAs on compliance issues" (p. 12). The current problem, as Gordon elaborates, is this:

> Currently, LEAs and SEAs frequently draw inference on the basis of how [The Education Department] handled related issues with other agencies in the past by drawing on correspondence between [The Education Department] and another SEA or LEA. Such correspondence is part of the public record and can be obtained via Freedom of Information Act requests, informally via networks, or via a paid private subscription service. Unequal access to this information is undesirable, but a bigger problem is that [The Education Department] 's stance drips out document by document. Policy can change over time, and can even change depending on the staff member involved (p. 12).

There are a number of templates that already exist for addressing such a problem. The Education Department's Office for Civil Rights' online "Reading Room" posts letters of resolution, and the Education Department's Office of Special Education Programs is mandated under the Individuals with Disabilities Education Act of 1990 to publish and widely disseminate correspondence from The Education Department to individuals interpreting IDEA or regulations that have been implemented in pursuant to it (Gordon, 2016, p. 12). With such an endeavor, Gordon sees ideally "demand for such resources would decrease with clearer explanations of compliance requirements; if particular areas prompt more requests, the federal response will be documented and the need to revise the "one-stop" document will clearly emerge" (p. 12). She makes one clarification to such a proposal: "this requirement would exclude informal e-mail correspondence directing readers to the main guidance document so as not to discourage interaction between [The Education Department] and the SEAs and LEAs" (p. 12).

However, all of this remains for naught if schools are limited by the unwieldiness of reporting. Gordon recognizes that:

> Congress and OMB have opened the door for flexible ways of compliance: the new "supplement not supplant" test, pilot programs in the Uniform Grant Guidance offering relief from time and effort for districts using a cost-allocation plan, and opportunities for fiscal consolidation. However, the LEA and SEA Title I administrators who serve as gatekeepers on innovation may discourage or prohibit districts from using the law's flexibility because of how new uses of funds might prove difficult to report in existing frameworks. To encourage districts to evaluate potential uses of Title I funds from an educational rather than

> accounting perspective, we must ensure that we are asking only for critical information, and then make it easy for districts to provide that information. In many cases, this will require extensive technical assistance (p. 12).

With that in mind, Gordon proposes two guidelines for the Education Department as they navigate new systems of funding.

First, the Education Department should "start fresh in determining content and format of federal reporting requirements" (p. 13). As it currently stands, States and districts face enormous federal reporting burdens, reporting hundreds of data elements in multiple formats to different divisions of [The Education Department] to meet the requirements of different laws (Gordon, 2016, p. 13). But even more frustrating "than the cost of staff time spent reporting is the potential for reporting requirements to distort grant allocation decisions. States may deny particular uses of Title I—not because such uses are illegal, but because the states do not know how to fit them into the reporting framework" (Gordon, 2016, p. 13). Gordon proposes that "[The Education Department] should rethink all reporting requirements—not just those related to Title I, but also the requirements for all its elementary and secondary programs, limiting required fields to those critical for active policy decisions and research and improving the technical design of federal reporting systems to work more seamlessly with state infrastructure" (p. 13). According to Gordon, there already exists a relevant government institution for such a task: "the CCSSO's Education Information Management Advisory Consortium could serve as a useful resource to [The Education Department] in these efforts" (p. 13).

Taking advantage of the available technology and tools is key to the efficiency and accessibility of this program. Gordon hopes to force both the federal government,

and states, to take on that problem by having the Education Department "competitive pilot grants for technical assistance to SEAs and LEAs to convert to simpler and more-flexible forms of fiscal compliance, emphasizing the supplemental funds test, fiscal consolidation, and direct cost allocation" (p. 13). The expectations for the program are specific and extensive, and are best explained directly by Gordon:

> Fewer than five SEAs and several LEAs within each participating state would participate in the first round of grants. Awardee SEAs should have strong demonstrated capacity for innovative educational practice and good relations with their LEAs. SEA- and LEA-specific existing data infrastructure, and existing LEA resource allocation methods, would determine the needs of each grantee, with the magnitude and nature of each grant set accordingly. The goal would be to set up integrated data systems for internal LEA needs—for example, personnel, budget, and student information systems—that seamlessly automate federal and state monitoring and compliance documentation into internal record-keeping processes. Each state will need individualized assistance because of each state's unique state-level school finance and education policy environment, including varying categorical grants to LEAs and existing IT infrastructure. The technical assistance package will include help from policy, legal, accounting, and/or IT consultants deeply familiar with federal education programs. These consultants will design individual approaches based on state-specific programs and goals, district-specific intradistrict resource allocation methods, and the corresponding record-keeping

needs for SEAs and LEAs. Much of their work will involve getting funds allocated from the district reported at the school level.

During the pilot period, a few LEAs (chosen to represent a range of those in the state) per participating state will help to develop and test the new systems; they will need to use both the status quo system (like the rest of the LEAs in the state) and the new system during this time. Agency staff would want to invest the likely considerable energy required for these improvements not only to reduce their compliance burden in the future, but also to generate data useful to them in tracking progress toward their own goals. After assessing initial experiences, grants could be expanded to more districts in participating states and to additional states. Feedback from the pilot period could also help ED determine any useful steps it might take, such as changing reporting requirements or establishing new numbers for reporting in the Catalog of Federal Domestic Assistance to facilitate consolidating funds.

The cost of this technical assistance would vary greatly based on state circumstances; an initial pool of $10 million would provide a substantial start, with the number of awardees determined as a function of how extensive the proposals are. LEA grants could be federally administered and funded through the Development Grant mechanism of the Investing in Innovation Fund (i3) program, with outside matching. SEAs are eligible for i3; private foundations could take on SEA and/or LEA assistance (p. 13).

Such a program would go far in streamlining, and modernizing, the school data reporting framework as it exists today. If funds are to be effectively targeted to the students who need them the most, the data must be correct, current, and extensive in helping apply funds effectively.

Gordon is aware that some may think that increased funding may only further the all too common problem of rich schools co-opting the resources of poorer schools within the district. But this increased transparency in how schools report budgets to the state and federal government makes it much easier for governments to see whether schools are receiving funds for students they should not. As Gordon sees it, "while it is impossible for any regime to completely eliminate "leakage" of funds to richer schools within a district, the new test seems likely to reduce leakage… The systematic nature of the test is an improvement over existing tests for comparability, which only look at the actual distribution of staff over schools without asking how it emerged" (p. 18). Given that these funding guidelines are "the law," this also allows schools to raise suspicions of underfunding with the federal government. Ultimately, to Gordon, these concerns represent mostly just an excuse to evade responsibility of the real problem: "encouraging direct cost allocation and fiscal consolidation may strike the same fears of leakage. The historic emphasis on preventing leakage at all costs has served in practice to rule out effective uses of funds; rather than ensuring that no Title I dollars reach any student who is not disadvantaged, we should focus on using Title I funds to best meet the needs of the disadvantaged" (p. 13).

Gordon's last proposal, prominently contained within its own section, calls for a focus on single-audit quality. A single audit is defined by the federal government as "an

organization-wide financial statement and federal awards' audit of a non-federal entity that expends $750,000 or more in federal funds in one year" (Gordon, 2016, p. 13). Successful audits are important to ensuring schools are operating as they should. But, as Gordon found in a PCIE and ECIE produced 2007 "Report on National Single Audit Sampling Project", "only about half of single audits deemed acceptable in quality" (p. 13). She calls for further work into the effectiveness of single-audits, and how to improve them, proposing that the PCIE or another group undertake an implementation study of the 2007 recommendations," in addition to "a new sampling project to measure single audit quality several years into the Uniform Grant Guidance transition" (p. 13).

While it may seem to the contrary, the effectiveness of these rules and guidelines rests on local schools ability to navigate and fully utilize a relatively large degree of control. Gordon realizes "the most useful ways to counter these negative effects of poverty will vary with local context. The local control inherent in Title I is therefore not simply a matter of political necessity, but also the key to effective use of federal funds. While refined data on what school districts do with money—not just Title I, but any money—are hard to come by, we do have evidence that districts can spend discretionary revenue effectively" (p. 10). While Gordon acknowledges that scholars circa 2016 did not have "refined data on what school districts do with money—not just Title I, but any money," they did have evidence: "evidence that districts can spend discretionary revenue effectively" (p. 10). C. Kirabo Jackson, Rucker Johnson, and Claudia Persico in a 2016 study show that increases to district-level spending coming from state-level school finance equalization programs are associated with improvements in educational attainment and adult wages, and declines in adult poverty; these impacts are, notably,

stronger for poor students. UCI economist Greg Duncan and Harvard Graduate School of Education economist Richard Murnane, in an earlier 2014 study, emphasize the lack of a "silver bullet" for countering poverty, but highlight cases where high-poverty schools are beating the odds. They describe how public pre-kindergarten, comprehensive school reform, and networks of small high schools of choice—when implemented well, with consistent and strong supports—can improve outcomes for students in high-poverty schools. Implementations of identical or similarly progressive programs are all possible with the increased levels of federal and state aid proposed here (Gordon, 2016, p. 10).

III. Addressing: The Teacher, Curriculum, and Accountability Problem

The teacher problem within the United States is a problem of attraction. To best invest in the United States' future - students - the teaching profession requires some of the America's most intelligent and driven individuals. The country's future success depends on it being an attractive job. Unfortunately, the job market for teaching in America is not very competitive. In fact, it might be even considered unattractive to most people in the United States. Previous research has found that the most successful education systems rely on teaching being a highly sought after, and competitive, profession. Furthermore, within the United States' current education system, the students that need quality teaching the most (from poor schools, one with low resources and unideal teaching conditions) do not get it because those teaching jobs are unattractive compared with other teaching jobs. Teacher positions in more well-endowed schools, serving more well-endowed families, offer better pay and/or easier teaching conditions. In addressing attractiveness, teaching is its own wicked problem. Solutions do not

involve just a simple wage raise; problems must be attached from every angle in making the position as attractive as it can be even in the most difficult of circumstances. Put perfectly by Darling Hammond:

> If the interaction between teachers and students is the most important aspect of effective schooling, then reducing inequality in learning has to rely on policies that provide equal access to competent, well-supported teachers. The public education system ought to be able to guarantee that every child who is forced by law to go to school is taught by someone who is knowledgeable, competent, and caring. That is real accountability (2001).

Yes, it does start by finding ways to pay effective teachers more, but it must also focus on creating more effective teachers and, ultimately, making teaching easier for teachers. In making the profession more attractive and effective, policy-makers need to look at not only addressing wages but also administrative support, respect, hours, and students preparation for the classroom.

The shortage of effective, motivated teachers has largely been left unaddressed by the United States education system with grave consequence. “Policymakers have nearly always been willing to fill teaching vacancies by lowering standards so that people who have had little or no preparation for teaching can be hired, especially if their clients are minority and low-income students,” explains Darling-Hammond (2001). Just as important as motivating people to become teachers, is giving prospective teachers incentive to put in serious preparation before they take on teaching responsibilities. As Darling-Hammond has seen too often, policy makers justify lowered standards “by the presumption that virtually anyone can figure out how to teach” (2001). But as she has

found, this is simply not true as “research consistently shows that fully prepared and certified teachers—those with both subject matter knowledge and knowledge of teaching and learning—are more highly rated and more successful with students than teachers without full preparation” (Darling-Hammond, 2001; Druva & Anderson, 1983; Greenberg, 1983; Evertson, Hawley, & Zlotnik, 1985; Ashton & Crocker, 1986, 1987; Darling-Hammond, 1992). Vanderbilt education professor Carolyn M. Evertson, University of Maryland education professor Willis D. Hawley, and Department of Education researcher Marilyn Zlotnik reach the same conclusion in their own research review: “the available research suggests that among students who become teachers, those enrolled in formal preservice preparation programs are more likely to be effective than those who do not have such training. Moreover, almost all well planned and executed efforts within teacher preparation programs to teach students specific knowledge or skills seem to succeed, at least in the short run” (p. 8). Darling-Hammond, going further in reviewing research on poorly prepared teachers, discovers “a number of studies have found that teachers who enter the teaching profession without full preparation are less able to plan and redirect instruction to meet students' needs (and less aware of the need to do so), less skilled in implementing instruction, less able to anticipate students' knowledge and potential difficulties, and less likely to see it as their job to do so, often blaming students if their teaching is not successful” (Darling-Hammond 2001; Bledsoe, Cox, & Burnham, 1967; Copley, 1974; Gomez & Grobe, 1990; Grossman, 1989; 1990; Bents & Bents, 1990; Rottenberg & Berliner, 1990;).

A lack of prepared and motivated teachers also dooms the quality of curriculums. Teacher expertise and curriculum quality are directly related because expert teachers are a prerequisite for the successful implementation of challenging curriculum. “Teachers who are well-prepared are better able to use teaching strategies that respond to students' needs and learning styles and that encourage higher-order learning” (Darling-Hammond, 2001; Peikes, 1967–1968; Skipper & Quantz, 1987; Hansen, 1988), explains Darling-Hammond. Thus, Darling-Hammond expands, “since the novel tasks required for problem solving are more difficult to manage than the routine tasks associated with rote learning,” studies have shown that “lack of knowledge about how to manage an active, inquiry-oriented classroom can lead teachers to turn to passive tactics that “dumb down” the curriculum, busying students with workbooks rather than complex tasks that require more skill to orchestrate” (Darling-Hammond, 2001; Carter & Doyle, 1987; Doyle, 1986; Cooper & Sherk, 1989). While letting a program or a workbook do the teaching may seem like a labor-cheap way to teach, it is not an effective way to teach most students. Teacher preparation relies on “the use of teaching strategies that encourage higher-order learning and the use of strategies responsive to students' needs and learning styles,” because they are central to classroom success maintains Darling-Hammond. Thus, she concludes, “policies that resolve shortages in poor districts by hiring unprepared teachers serve only to exacerbate the inequalities low-income and minority children experience… Shortages should be met by enhanced incentives rather than by lowering standards, especially for those who teach children in central cities and poor rural schools” (2001). Fellow education academic Carl Grant agrees, “teachers who perform high-quality work in urban schools know that, despite reform efforts and endless debates, it is meaningful

curricula and dedicated and knowledgeable teachers that make the difference in the education of urban students" (p. 770).

Why A Teacher and Community Centered Approach is Important as Ever Despite Alluring Radical Innovations in a Digital Capitalism Era

The proposals that will follow do not represent a radical turn from current educational norms. In fact, they double down on current investments in personnel and community quality, and neglect to take much from the decades of innovation spurred by a capitalist technological revolution. As will be shown, countries like Canada and Finland, and education experts, have found their success in realizing education works when it mirrors a successful family dynamic on a large scale. That is what policy makers like Betsy DeVos fail to realize when they advocate for a capitalist driven combination of "Charter Schools, On-line Schools, Virtual Schools, Blended Learning, um… any, any combination thereof, and frankly any, you know, any combination, or any kind of choice that hasn't yet been thought of" (Pozzuoli & DeVos, 2015).

In his book *Learning to Save the Future*, SUNY Buffalo Social and Psychological Foundations of Education Professor Alexander J. Means rightly asserts capitalist driven innovation can help in finding ways to better mirror that dynamic, but it will not find a better replacement. Solutions born through capitalism simply cannot compete with a favorable structure that has withstood thousands of years of evolution. The human and community element of education is just as important in education, as it is in family. A parent would never be replaced by a computer, and a child would never be cut-off from their community; education deserves to be no different. A successful family-dynamic has

not changed much throughout human existence: it depends on strong, responsive, present role models and a closely-linked, in-sync, and supportive community (Shaffer & Kipp, 2013, p. 541). For seven hours or more each day, schools are an extension of that dynamic. For those whose family social construct is already successful, schools need to mirror that; but for students whose home dynamic does more harm than good, schools represent an opportunity to replace the influence of a successful home dynamic in the significant time the student spends in school. The following paragraphs will engage in a philosophical exercise recognizing the importance of a quality family-dynamic in successful development (Bernard, 2018, 6-12), showing that bolstering that dynamic in school is the governments best chance at providing a minimally invasive solution to inequalities in family dynamics.

As noted in the Stanford Encyclopedia of Philosophy, when "parents provide various amounts of special boost for their children" (p. 3). That aid comes in many forms: high-quality private schooling, providing more attentive at-home nurturement, increased access to elite social circles, and most especially a stronger and a more focused motivation and effort to help their children get ahead in life. Since parents vary in how strongly they provide these advantages, and in how effective they are at boosting their children's personal development, the success of individuals with the same native talent and ambition will rest on whether or not they have these advantages. A society who wants to realize the potential of all its citizens, should try to provide these aids to everyone.

It is not as simple as redistributing wealth: these advantages, while seen mostly in wealthy families, are social and cannot be entirely explained by material means. Taking

away the wealth of a prosperous parent motivated to see their child succeed will not eliminate that parent's motivation. Conversely, giving additional funds to a poor parent who does not care about their child will not ensure they start to care about their child's future. There are numerous examples of wealthy parents who neglected their children and disadvantaged parents who helped their children to success. For instance, the Williams sisters Serena and Venus. Both Williams sisters grew up in an incredibly poor neighborhood, but despite the hindrance became two of the world's greatest female tennis players. These advantages, the ones the Williams sisters utilized, are contributed by social constructs within family life. To change the family dynamic a child is exposed to would require a change to the way a family operates.

In the interest of liberty, the United States government should try to be minimally invasive in family life; thus, the government should instead look for ways to address differences in family-life without directly abridging on the families liberties. It can do so by supplying what children with a subpar family dynamic lack. As noted before, in the United States typically parents have already given the state right to essentially raise their child for seven hours or more, it is up to the state to make the best of that time in ensuring a well-developed populace. States should look to supply a substitute for positive family-life to those who need it without infringing upon basic liberties.

One way would be to provide additional role models for children who lack parental advantages. In order to avoid being invasive, these role models should be available to all children, but not forced upon them in the home. Those children who already have parents who adequately nurture their talents will be less inclined to seek out an additional parental-type figure. Their parent will already have occupied a large enough

role in their life to the extent that there is little room for another person to help nurture their talent. Thus, the role-model program will be efficient in that mostly those who need it will use it.

To attempt to compensate for the advantages many children will possess by having top-notch role models at home, the role models supplied should be as devoted and outstanding as possible. Teachers must try in many ways to provide what parents cannot provide, especially motivation and demonstration in the importance of taking education seriously (Ripley, 2013). Every child should have the opportunity to access an outstanding, high-achieving role model who, by example, can demonstrate a devotion to education and the importance of taking education seriously.

To increase the chances of attracting outstanding individuals, the childhood education professions should also look to set the pay-grade and rigor to a level as competitive as they can. If teachers and school administrators are to be as competitively paid as positions like lawyers and doctors, they must undergo the same level of training required for those positions to try and achieve the same levels of common quality. Post-graduate school for teachers should be at the same level as post-graduate education is for those positions. Teachers and administrators, before they can be hired, should have to show similar levels of comprehension of their position. In addition, since becoming a teacher now requires an extensive amount of work and dedication, only those most devoted will enter the field because only they will be willing to sacrifice to become a teacher. More post-graduate work in education will lead to greater research and, therefore, greater advances in the field of teaching. This will allow for decisions made in

the field of education to be more informed in that they will be backed more definitively by research and data.

But, even increasing the talent threshold for in-school role models does not prove to properly address the equality of role model talent available to every child. Statistically those in poorer neighborhoods have a need for better role models, especially when compared with the need in richer neighborhoods (Sonenstein, 2014). To ensure the best role models go to poorer neighborhoods, teacher pay should directly correlate with the average income level in the school's neighborhood. As such, jobs in poorer neighborhoods would have more attractive pay grades then those in richer neighborhoods. Teachers and administrators with performance deserving of a higher wage will be incentivized to come teach where a history of deficient education may make things harder. This will help to address that deficiency, one that appears even worse when compared to where students in wealthier neighborhoods are. With more advantages now going to the most disadvantaged, salaries will begin to even out across the nation as disadvantaged neighborhoods improve after being given the chance at education, and opportunity, on a level playing field.

The diversity of role models is important too. Just like with children, adults only know what they have been exposed to. It is important to ensure educators come from all walks of life so that students will have access to a variety of knowledge and worldliness witnessed firsthand. Part of that is ensuring there is no discrimination in where high schools future-teachers come from. Since teachers will be able to come from any high school, and teaching will be an attractive position, the state should receive prospective teachers from all backgrounds. Fair equality of opportunity must be guaranteed

throughout the higher education teachers receive. It begins with the state ensuring prospective teachers can attend the colleges and universities required to become a teacher.

An increase in diversity among educators should eventually bring an increase in the diversity of curriculum. As teachers and administrators become more diverse, those setting the curriculum will come to reflect the more diverse pool. The curriculum should come to reflect the combined wealth of knowledge and worldliness of the people behind it. There should be nothing limiting what children are constructively exposed to. While this paper will not be able to completely address equality of opportunity in viable education reform, it hopes to get closer than ever before.

Increasing Teacher Wages to Competitive Levels

The simplest way to bring in more teachers, especially capable and highly motivated ones, can be accomplished by paying teachers the competitive wage they, for the most part, do not receive now. That so much is clear claims Darling-Hammond, "building and sustaining a well-prepared teaching force will require local, state, and federal initiatives. To recruit an adequate supply of teachers, states and localities will need to upgrade teachers' salaries on level with those of college graduates in other occupations, who currently earn 20% to 50% more, depending on the field" (Darling-Hammond, 2001; Ebmeier, Twombly, & Teeter, 1990). Danielle Farrie, research director at the Education Law Center, agrees: "one of the most important ways that states can ensure that teaching jobs remain desirable in the job market is to provide competitive wages" (p. 23). In a joint research project with Baker and David Sciarra, Farrie

"constructed a measure of wage competiveness that compares teachers' salaries to the salaries of other professionals in the same labor market and of similar age, degree level and hours worked" (p. 24). The below results are reported for 25-year-olds and 55-year-olds, teachers at the beginning of their careers and teachers near the end of their careers:

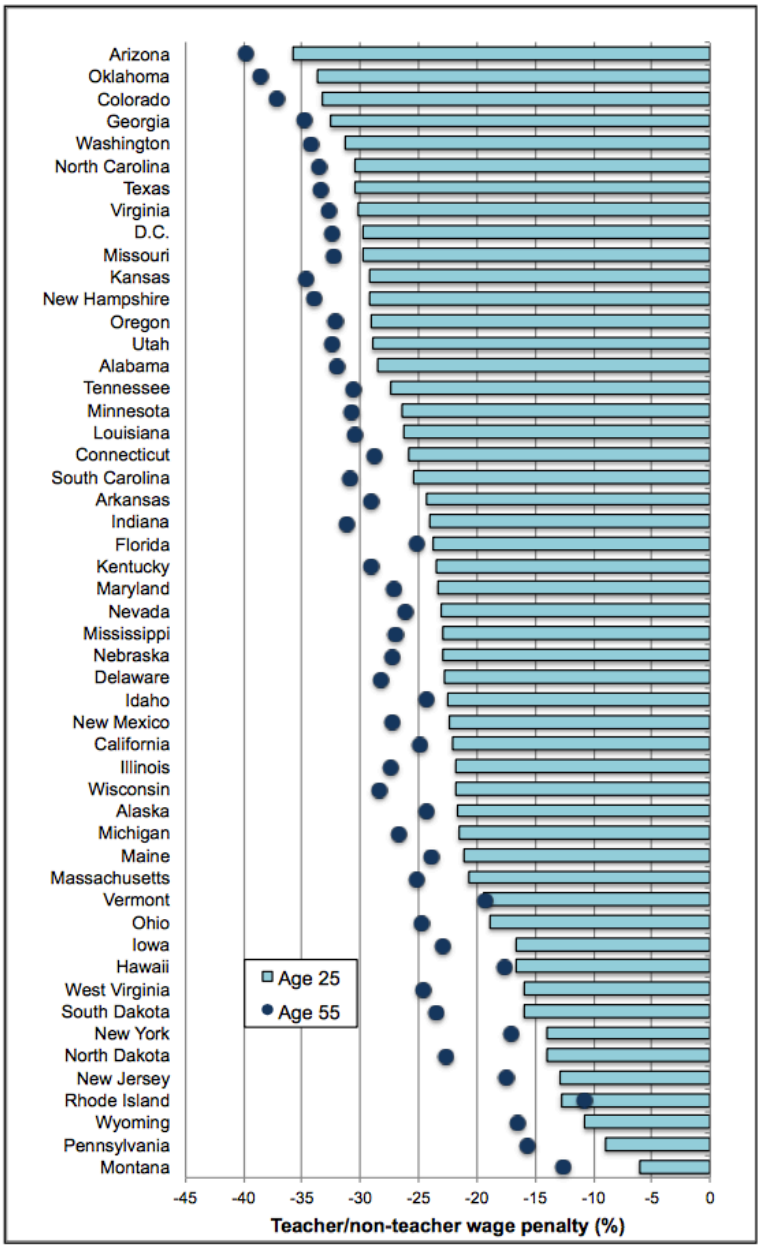


Figure 1

Teacher wage penalties, by state

Percentage difference between predicted teacher and non-teacher wages, by state and worker age, 2016

Notes:
Model controls for education, weeks worked, hours worked, and age. Includes private school teachers.

Variables used:
sal_parity25; sal_parity55

Longer bars, and dots further to the left, indicate larger teaching penalties. More space between the bars and the dots indicates a larger penalty for veteran versus young teachers.

(Baker et al., 2019, p. 9)

As is clearly shown by the diagram, Farrie and her colleagues found "most states' average teachers' salaries are far below the salaries of their non-teacher counterparts" (p. 24). Farrie's data indicated "on average, teachers beginning their careers at age 25 earn about 82% of what non-teachers earn. No state has average teacher wages that are comparable to workers in comparable fields. Wages are least competitive in Arizona, Oklahoma and Colorado, where teachers earn about 30% less than their counterparts at any age" (p. 24). As it currently stands, in every state nothing about teacher wages makes teaching an attractive profession.

The better than average benefits do help a bit, but they do not do nearly enough to make up for the modest wages. While Baker acknowledges that "We cannot estimate the cost of teachers' benefits state by state, but we can approximate the degree to which benefits offset wage differences nationally" (Baker et al., 2019, p. 2). Using data from the Bureau of Labor Statistics Employer Costs for Employee Compensation (ECEC) survey, Baker and his colleagues find that public school teachers do indeed receive more generous benefits than non-teacher professionals: "the ECEC estimates indicate that benefits offset teaching wage penalties by 7.2 percentage points when teachers are compared with professionals in general, and 9.3 percentage points when compared with private sector professionals" (Baker et al., 2019, p. 2). Even if these estimates were off by 5 percentage points, it would still mean only seven states pay their teachers a wage even approaching something competitive. "In other words, in all but a handful of states, benefits do not come close to "explaining away" teaching penalties" (Baker et al., 2019, p. 2) concludes Baker. In investing in teachers, governments invest in students;

governments should ensure teachers benefit in every investment they make, that includes wages especially.

Funding reforms called for so far in this paper to address allocation already account for paying teachers competitive wages; Baker's formula relies on a Comparable Wage Index (CWI) to provide funding for raising district wages to district competitive levels. The CWI is the annual work of Lori Taylor, National Center for Education Statistic contributor and Texas A&M professor. As explained on the website the CWI can be found on, the CWI "is a measure of the systematic, regional variations in the salaries of college graduates who are not educators. It can be used by researchers to make better financial comparisons across geographic areas." Baker describes it as "an annual, district-level geographic competitive wage adjustment to aid in accounting for cost differences across regions and across local districts within states" (Baker, 2018, p. 206). Baker's formula allocates enough money so wages can be competitive in every district, from there it is up to districts to make paying teachers these competitive wages a priority. If increases in allotted teacher salary funding are to be used effectively, states and maybe even the federal government must look to enforce competitive wages as a minimum or near minimum in every district. Only then will governments ensure for schools a fair chance at attracting not only teachers, but quality teachers.

Providing Pathways for Growth and Community in a Teacher's Career

To further attract qualified teaching candidates, governments need to establish pathways for growth and further success in a teaching career. This would not only elevate the prestige of the profession, but also simultaneously help keep and motivate already

effective teachers. Teaching currently presents itself as a dead-end job, with little room for career development or advancement into a higher paid position within the profession. Those thinking of classroom teaching see only the opportunity to lead a classroom of students for the rest of their career, at relatively the same wages. While that may be enough for some, those who crave more responsibility may gravitate towards other professions where the opportunities for further leadership and responsibilities seem boundless, with considerable raises in pay along the way. For example, to become a lawyer is to practice law, but there is the opportunity to become a partner allowing a lawyer to both practice law with the additional responsibility of helping lead a law-firm. Becoming a partner encourages a talented lawyer to stay loyal and motivated, until late into their careers, and the position's existence encourages young lawyers to strive for it. While some may consider administrative positions, like principal, as opportunities for teachers to advance their careers, administrative positions do not allow teachers to continue to teach. That takes away from the prestige, and draw, of teaching. The teaching profession should look to attract those excited about the prospect of teaching in a classroom, not eventually advancing to administrative work.

At the same time, the goal should be to keep experienced and effective teachers in the classroom setting, not to push them away from it. New York City teacher union representative Ali McKersie, also an experienced and effective teacher as evidenced by the time the author spent in her classroom, explains the desires for "growth" common among experienced teachers:

> As an experienced teacher, I feel most gratified (my morale is high), when I'm actively engaging my growing edge.

For many experienced teachers, like myself, this growing edge hinges on the extent to which their schools provide genuine pathways for leadership roles. And by leadership, I mean roles that are instructional in nature, not just administrative (i.e. principal, assistant principal). (This is something I bemoan -- the lockstep way that career advancement is presented in education. For example, you start as a classroom teacher, and then if you're ambitious, you move on to administration. What if you're ambitious, but you have no interest in becoming a principal?)

So, speaking to this idea of instructional leadership, what are the opportunities for experienced teachers to formally coach and mentor their younger, less-experienced peers? Are there opportunities for collaboration around curriculum construction, dissemination, and publication? Is there opportunity and encouragement for attending and presenting at conferences? What about professional development? Are there opportunities for experienced teachers to craft meaningful workshops in-house?

And in terms of building greater latitude in decision-making, what are the opportunities for teacher involvement and agency, like planning the schedule, devising a new disciplinary structure based on restorative practices, running a student advisory program, engaging the community in creating opportunities for students to do meaningful real-world, service projects?

Schools that provide these kinds of opportunities are certainly supporting the growth of their experienced teachers, and ensuring higher morale overall.

A study done by education researcher Melissa Wu, encompassing four urban school districts and over 90,000 teachers, found McKersie's need for growth and further control had left many experienced and effective teachers frustrated enough that they left their schools. Wu reports "America's urban schools are taking a negligent approach to teacher retention; many rarely make a strong effort to keep 'Irreplaceables,' teachers so successful at advancing student learning that they are nearly impossible to replace, or usher unsuccessful teachers out. As a result, the best and worst teachers leave urban schools at strikingly similar rates. It is a reality of current policy: there are few incentives for administration to try to hang on to discontented effective teachers, and very few ways for effective teachers to influence poor school cultures and working conditions while remaining in the classroom. Wu's study gives two general recommendations: "make retention of Irreplaceables a top priority, and strengthen the teaching profession with higher expectations" (TNTP, 2012).

In doing just that, in what shall be a clear pathway for growth within the teacher profession, United States schools should establish the role of multi-classroom leaders (MCLs). The education consulting organization Public Impact has come up with a thorough version of the MCL model, which will serve as the basis for this paper's proposed implementation. They define an MCL as "teachers with a record of high-growth student learning and leadership competencies" who will now, in being promoted to an MCL, "both teach part of the time and lead small, collaborative teams of two to eight teachers, paraprofessionals, and teacher residents in the same grade or subject to meet

each MCL's standards of excellence" (p. 1). The MCL's duties, as laid out by Public Impact, would include the following:

- Co-plan, co-teach, model excellent instruction, coach, and give feedback;
- Teach part of the time, in own class or otherwise (such as leading small groups);
- Lead the team to analyze student learning data and change instruction for high-growth learning by every student;
- Collaborate with the team, using the team's ideas and innovations that the MCL agrees may improve learning;
- Take accountability for learning and development of all students taught by the team members;
- Lead teacher development;
- Help choose and evaluate team members, dismissing low performers if necessary (in cooperation with the principal); and
- Participate on a schoolwide instructional team of leaders with other MCLs, the principal, and others.

(Public Impact, 2018, p. 1)

As Public Impact further explains, "this model enables excellent teachers to reach many more students, primarily by leading teaching teams while continuing to teach. MCLs lead the team of teachers to jointly build each student's academic, social, emotional, behavioral, and organizational skills. MCL teams have a median of five teachers, but experienced, successful MCLs may lead larger teams of six to eight, while some lead

smaller teams" (p. 2). "Students who would not otherwise have access to an excellent teacher's standards and methods can now have them, either directly from MCLs or from teachers on their teams" (p. 2) contends Public Impact. Having implemented their MCL model in some schools already, Public Impact found that MCLs were effective in increasing student achievement:

> "teachers who were on average at the 50th per- centile in student learning gains, who then joined teams led by MCLs (who had prior high growth as teachers), produced learning gains equivalent to those of teachers from the 75th to 85th percentile in math, and, in six of the seven statistical models, from 66th to 72nd percentile in reading. Teams studied had a median of five teachers in addition to the MCL. Student growth began to increase schoolwide after MCLs were added in only part of a school" (p. 2).

Public Impact asserts that this growth was "budget neutral" (p. 2).

While Public Impact generally focuses on the positive impact an MCL role would have on students, its greatest attributes might be in how it addresses many of the weaknesses of teacher profession within the United States. First, it represents a clear position for teachers to aspire to in growing their careers. Second, it allows experienced and effective teachers to assume a leadership role and gain further control over the environment in which they teach in. Third, it still allows teachers to remain in the classroom and take an even more hands on approach in how they choose to use their time. It is important to note the MCL role as proposed does not force effective teachers

who simply love to teach out of their current role; effective teachers are not forced to take on the role.

Even if some effective teachers neglect to take the position, the increased responsibilities of an MCL role gives governments a justified opportunity to reward effective and experienced teachers with a significant pay raise, further raising the prestige and draw of the teacher profession. As proposed, the median number of teachers an MCL will lead shall be roughly five. That means, if implemented methodically throughout the nation, roughly every sixth teacher would be an MCL. The government, state or federal, probably cannot afford to give all teachers the kind of wages earned by others who go through significant pre-professional work like engineers, accountants, lawyers, and doctors.

However, it might be affordable to offer socially significant wages to a sixth of the most effective and experienced teachers they employ, especially when the further responsibilities of an MCL may warrant it. Currently there will be almost 3.2 million full-time-equivalent teachers in the fall of 2021, according to federal projections (NCES, 2019). If one sixth of 3.2 million teachers will become MCLs, that means around 530,000 MCLs. In 2020 the median school Principal salary is $98,490 (BLS, 2021). Considering the substantial responsibilities MCLs take on in addition to their teaching, an MCL salary should try and approach that kind of pay. A 30% pay raise for MCLs would raise experienced teacher salaries in the United States by an average $22,000 beyond wages already adjusted competitively, putting the average MCL annual pay just below current annual Principal pay: $96,2020. Such an initiative would cost taxpayers roughly 11

billion dollars for about 530,000 MCLs. The table below breaks down what an MCL pay raise would look like:

State	full-time teachers K-12 (2017-18)	estimated MCLs at a rate of 5 teachers per MCL (2017-18)	average teacher salary (2017-18)	Teaching wage penalties (%) at age 45 (2017)	average teacher salary age 45 adjusted to a wage competitive level 2017-2018	New annual Salary at 30% Raise	Total Supplemental Cost of MCL Pay Raises
United States Totals	3,181,421	530,237	$58,950	-25.53	$74,002	$96,202	$11,816,484,215
Alabama	46,374	7,729	48,868	-31.50	$64,261	$83,540	$149,002,955
Alaska	7,723	1,287	68,138	-22.70	$83,605	$108,687	$32,284,197
Arizona	61,853	10,309	47,403	-39.70	$66,222	$86,089	$204,801,440
Arkansas	31,742	5,290	48,616	-28.00	$62,228	$80,897	$98,762,821
California	285,261	47,544	78,711	-24.00	$97,602	$126,882	$1,392,097,071
Colorado	56,002	9,334	46,506	-36.30	$63,388	$82,404	$177,491,837
Connecticut	41,848	6,975	72,561	-27.30	$92,370	$120,081	$193,275,308
Delaware	9,409	1,568	60,214	-26.90	$76,412	$99,335	$35,947,821
D.C.	6,933	1,156	76,131	-32.10	$100,569	$130,740	$34,862,262
Florida	143,545	23,924	49,407	-23.80	$61,166	$79,516	$439,002,712
Georgia	115,415	19,236	54,602	-34.10	$73,221	$95,188	$422,541,713
Hawaii	11,243	1,874	57,674	-16.60	$67,248	$87,422	$37,803,398
Idaho	16,451	2,742	47,504	-24.80	$59,285	$77,070	$48,764,870
Illinois	127,238	21,206	61,602	-26.00	$77,619	$100,904	$493,801,262
Indiana	61,485	10,248	50,554	-29.60	$65,518	$85,173	$201,418,662
Iowa	37,285	6,214	55,443	-22.20	$67,751	$88,077	$126,305,447
Kansas	34,759	5,793	47,984	-33.60	$64,107	$83,339	$111,414,107
Kentucky	40,294	6,716	52,339	-27.80	$66,889	$86,956	$134,761,756
Louisiana	47,580	7,930	50,000	-28.80	$64,400	$83,720	$153,207,600
Maine	14,760	2,460	51,077	-22.80	$62,723	$81,539	$46,289,246
Maryland	60,740	10,123	66,961	-25.80	$84,237	$109,508	$255,827,581
Massachusetts	73,420	12,237	77,804	-24.70	$97,022	$126,128	$356,166,250
Michigan	81,617	13,603	62,200	-25.50	$78,061	$101,479	$318,555,232
Minnesota	53,681	8,947	57,346	-29.40	$74,206	$96,467	$199,171,874
Mississippi	31,252	5,209	42,925	-26.30	$54,214	$70,479	$84,715,226
Missouri	75,350	12,558	48,293	-31.00	$63,264	$82,243	$238,346,480
Montana	10,510	1,752	51,422	-14.00	$58,621	$76,207	$30,805,378
Nebraska	24,947	4,158	52,338	-25.50	$65,684	$85,389	$81,931,174
Nevada	21,443	3,574	57,376	-25.20	$71,835	$93,385	$77,017,629
New Hampshire	16,790	2,798	57,253	-33.10	$76,204	$99,065	$63,973,042
New Jersey	115,858	19,310	69,623	-15.90	$80,693	$104,901	$467,446,810
New Mexico	21,089	3,515	47,500	-26.40	$60,040	$78,052	$63,309,178
New York	214,312	35,719	79,637	-16.70	$92,936	$120,817	$995,869,063
North Carolina	94,117	15,686	49,837	-32.70	$66,134	$85,974	$311,215,267
North Dakota	8,561	1,427	51,618	-20.70	$62,303	$80,994	$26,668,767
Ohio	115,000	19,167	57,000	-23.30	$70,281	$91,365	$404,115,750
Oklahoma	41,305	6,884	45,245	-37.20	$62,076	$80,699	$128,202,748
Oregon	29,716	4,953	61,631	-31.10	$80,798	$105,038	$120,050,026

Pennsylvania	119,369	19,895	65,863	-13.80	$74,952	$97,438	$447,347,825
Rhode Island	10,747	1,791	66,477	-12.20	$74,587	$96,963	$40,079,429
South Carolina	50,857	8,476	48,598	-29.90	$63,129	$82,067	$160,527,074
South Dakota	9,658	1,610	42,668	-24.70	$53,207	$69,169	$25,693,658
Tennessee	62,525	10,421	48,456	-29.80	$62,896	$81,765	$196,628,270
Texas	356,920	59,487	52,575	-32.70	$69,767	$90,697	$1,245,062,328
Utah	29,188	4,865	47,244	-31.40	$62,079	$80,702	$90,597,532
Vermont	8,307	1,385	60,187	-19.00	$71,623	$93,109	$29,748,418
Virginia	104,571	17,429	51,049	-31.80	$67,283	$87,467	$351,790,344
Washington	61,065	10,178	54,147	-33.90	$72,503	$94,254	$221,369,275
West Virginia	18,910	3,152	45,701	24.00	$34,733	$45,153	$32,839,825
Wisconsin	55,172	9,195	54,998	-27.10	$69,902	$90,873	$192,832,921
Wyoming	7,224	1,204	58,650	-16.80	$68,503	$89,054	$24,743,356

(Baker et al., 2019; NCES, 2017;)

Stipulations like a minimum amount of experience in the community, a minimum level of education, and/or a government granted certification may be warranted in ensuring only effective and experienced teachers are granted the pay and control that comes with being an MCL. While promotions and hires would be decided at the school level, prerequisites will give lawmakers a good idea of who becomes an MCL. These requirements may also ease political uncertainty about such an initiative, giving policy makers a bit of control over who is eligible to become an MCL and receive substantially more taxpayer money.

In addition, an MCL role also helps foster a communitive and collaborative approach to teaching children, something sorely missing from most United States schools. In their book, education professors Sonya Douglas Horsford of Columbia University, Janelle T. Scott of UC Berkeley and Gary L. Anderson of NYU note that productive progress is made when a school's culture shifts from "one of isolation to one of visiting each other's classrooms and engaging in learning communities" (p. 237). An MCL's responsibilities, by design, require MCLs to foster collaboration and community

not only among the teachers they lead, but all of the teachers and MCLs in a school. These responsibilities create the same kind of environment Sahlberg has seen in Finland, where "teaching is regarded as a team sport built on teacher collaboration. Teachers are members of professional teams that share the same goals and purposes" (2015).

The MCL role forces United States schools closer to the Finland model for schooling Sahlberg describes: "most schools in Finland have both physical space and time for teachers to work together within every school day. School improvement and professional development focus on enhancing personal work and organizational performance and they normally have strong emphasis on teamwork, collaboration with teachers and schools, and shared leadership" (2015). McKersie insisted that successful schools, with effective curriculums and low teacher turnover rates, were ones that had created a "self-sustaining ecosystem" within the school. Schools like these are efficient because not only do low teacher turnover rates mean spending less money and time hiring and training new teachers, but teachers new and old are constantly being exposed to the collective knowledge of their peers. These schools have clearly structured support systems, and well defined roles for all their teachers. An MCL role accomplishes just that: clearly structuring support systems, and defining the role of each teacher. In its implementation, it forces teachers to approach a student's learning as if it really does take a village.

As Sahlberg shows, the MCL system is simply an extension of Finnish success, which is in turn an extension of United States based education innovation:

> Many education visitors to Finland expect to find schools filled with Finnish pedagogical innovation and state-of-the-art technology. Instead, they see teachers teaching and pupils learning as they would in any typical good school in the United States. Some observers call this 'pedagogical conservatism' or 'informal and relaxed' because there does not appear to be much going on in classrooms.
>
> The irony of Finnish educational success is that it derives heavily from classroom innovation and school improvement research in the United States. Cooperative learning and portfolio assessment are examples of American classroom-based innovations that have been implemented in large scale in the Finnish school system (2012).

Providing Pathways for Growth and Community in a Teacher's Career

Not just Finland, but Canada's success as well, has made it clear: in teaching a diverse array of children, the federal government needs to allow those who know the students best to decide how they approach education. Especially if the government is going to give schools more power in resource decisions explains Roza: "as state and federal reforms move accountability for student performance to the school level, some policymakers have suggested that new accountability should be accompanied with more school-based authority" (p. 81). That means not only giving local administrations more autonomy over education, but especially allowing qualified teachers more freedom in the classroom. While local administrations should have a sizable degree of say in what teachers do with taxpayer money, it is effective teachers who should be granted final say in how students are taught. Governments need to fully trust that their educators know

education best. While it may take further reforms for governments to have a teacher workforce they feel they can rely on, the kind of success that is seen in Finnish and Canadian classrooms is not going to come until teachers get those same levels of autonomy. In micro-managing its teachers, the United States does more harm than good. In truly allowing the system to thrive, the United States must trust teachers to do their jobs and ensure measures of accountability do not further hinder the system by limiting autonomy.

For teachers, it has been clear for a long time that being held accountable through testing does more harm than good. As a 1990 study of the implementation of California's new mathematics curriculum framework points out, when a curriculum reform aimed at problem solving and higher-order thinking skills encounters an already mandated rote-oriented basic skills testing program, the tests win out (Darling-Hammond, 2001; Cohen et al., 1990; Darling-Hammond, 1990b). In a different 1990 academic work, one teacher summed it up to University of Connecticut education researcher Suzanne Wilson as a catch 22: "teaching for understanding is what we are supposed to be doing… (but) the bottom line here is that all they really want to know is how are these kids doing on the tests? …They want me to teach in a way that they can't test, except that I'm held accountable to the test. It's a Catch 22…" (p.318). Teachers, forced to teach to the test because their job depends on it, are being forced into harming their own students. Darling-Hammond found "students in schools that organize most of their efforts around the kinds of low-level learning represented by commercially developed multiple-choice tests will be profoundly disadvantaged when they encounter more rigorous evaluations

that require greater analysis, writing, and production of elaborated answers" (2001). Finland, seen by many as the gold standard for education in the world and consistently ranked first in the world for its education system, does not test for these very reasons. Sahlberg describes how Finland is able to avoid the test through "a strong sense of trust in schools and teachers to carry out these responsibilities" (2015). "There is no external inspection of schools or standardized testing of all pupils in Finland. For our national analysis of educational performance, we rely on testing only a small sample of students" says Sahlberg (2012). As she sees it, "the United States really cannot leave curriculum design and student assessment in the hands of schools and teachers unless there is similar public confidence in schools and teachers."

Luckily, even now, there should be enough effective teachers to form a reliable form of accountability in the classroom in MCLs. Part of implementing the MCL role represents an opportunity to move away from oversimplifying and ineffective test based accountability, to a solution that offers much more room for autonomy and personalization in the curriculum. Currently, "educators are experiencing almost relentless pressure to show their effectiveness. Unfortunately, the chief indicator by which most communities judge a school staff's success is student performance on standardized achievement tests" explains education academic UCLA Graduate School of Education professor W. James Popham. Fortunately there is a growing recognition, as seen by education scholars Horsford and colleagues, "that in order to have successful schools, we need to build professional capacity within the schools… so that children come to school ready to learn and so that communities can hold their schools accountable

in ways that do not distort the education of their children the way high-stakes testing does" (p. 237).

The implementation of MCLs gives governments a more personalized form of accountability they can trust. Instead of relying on standardized tests to judge teacher performance, the experience and past effectiveness of MCLs can be relied upon as the premier method for holding teachers and curriculums accountable. MCLs will have the power to help choose and evaluate team members, dismissing low performers in cooperation with the principal if necessary (Public Impact, 2018, p. 1). Instead of delegating the accountability of tens or hundreds of teachers to an administrator who can only check in once in a while, MCLs' responsibilities mean they will be checking in every day. Being accountable for only five or so teachers, MCLs have more insight into their teacher's performance then any test possibly could pick up on, being able to evaluate teachers on the work they do every day. In keeping a close eye on only a couple of teachers, MCLs, chosen partly because of their track record of effectively using school resources, can be trusted to make sure their teachers are appropriately using funds in their teaching. Most importantly, unlike a test, MCLs will be able to help teachers figure out where they have wronged, and personally aid in correcting where they erred. While that places pressure on schools to pick effective MCLs, certainly the chances are higher that roughly 1 and 6 teachers are clear standout educators on their own merit, than a few tests being able to properly evaluate the learning quality of millions of students. There is a role for data; as Horsford and colleagues describe, "technical problems need to be solved, and sometimes quantification and spreadsheets are the best way forward. This can be true in

helping to track and document unequal graduation rates, referrals to special education, and suspension data" (p. 240). But, as they elaborate, "schools also need to build professional capacity" in challenging teacher isolation and promoting an important shift in school accountability (p. 240). Using the MCL to observe accountability offers clear advantages over a test, and while a test may still be useful from a general statistics standpoint, the ineffectual pressure it places on teachers means its role in education evaluation needs to be drastically reduced.

Directly Incentivizing Upliftment and Community

MCLs are not the only way to improve systems for accountability and fostering community; an incentive system based on student young-adult outcomes would provide incentives for teachers to strive towards the metric that undoubtedly matters most. Measuring a student's young adult outcome can be done a number of ways, but is commonly measured through a weighted combination of high school graduation (non-General Educational Development), college attendance, "idleness," crime, teen parenthood, and health status (Deming, 2009, 117). Each of these metrics is a strong indicator of lifelong success, and most importantly for taxpayers, a life-long lack of dependence on government assistance programs (Deming, 2009, 117). The easiest way to collect this information would be as part of the census, using averages of all those ages 20-30 to decide the combined young adult outcomes of students teachers taught. If it makes more sense, data could also be collected for one specific age group every year through applications for things like taxes, licensees and other government forms. Student outcomes could be compared to past school student outcomes ten years, or five years

before, to see the improvements communities and schools have made to foster success. With this data, student outcomes would be traced back to the teachers who taught them, and teachers can be considerably rewarded through either bonuses and/or permanent raises if their student's outcomes have improved over a school's past student outcomes (Deming, 2009). This incentivizes for what really matters: student outcome improvements and, therefore, improvements in a school and in the surrounding community. An outcome based reward system pushes teachers to seek out high need schools, promote betterment and inclusion of the outside community, and push teachers to further tailor their curriculums to enduring independent student success.

While some of these are standardized metrics, a couple bear further explanation. Non-General Educational Development (GED) high school graduation is preferred over all forms of high school graduation because there is evidence GED certification is not rewarded equivalently to a high school degree in the labor market (Deming, 2009, 117). A young-adult surveyed under "idleness" if they are not enrolled in school and report zero wages. Crime could be considered any contact with the criminal justice system. Self-reported health status is frequently measured by averaging responses to a Likert scale item on self-reported health status (Deming, 2009, 117). Self-reported health status has been identified as a powerful predictor of mortality and other negative health outcomes even when controlling for doctor reports and other behaviors (Deming, 2009, 117). All of these test not only the quality of life of former students, but the costs that supporting their lives represent to the taxpayer.

This is part of the reason an outcomes based rewards system makes so much sense, it pays teachers for the social costs they have saved society and, in that, pays for

itself. Improved outcomes means less students receiving welfare, less students being held in jails, less students requiring medical help, more students contributing more taxes, and more students having children destined for their own successful outcomes. Bonuses and salary increases need to directly reflect those savings, and if a teacher has been part of a system that drastically increased outcomes, then they need to be drastically rewarded relative to considerable social costs they have saved the government. Carroll and Erkut found for the average U.S. born white male, "educational attainment from some high school to high school graduation would be associated with increased tax payments over his lifetime equal to $54,000" in 2002 dollars. If a hundred or so more students graduate high school going through a teacher, that teacher has contributed a net positive to the taxpayer worth millions. And that is just for high school graduation. While the actual deserved bonuses and pay raises will require a good deal more fiscal research, there is no doubt that any teacher who contributed to a system that was clearly working for the betterment of society deserves a great deal of gratitude from the government.

The prospect of these heavy incentives would push skilled teachers to seek out schools with the most room for improvement, making the neediest schools some of the most attractive jobs on the market. Currently, the most attractive jobs on the market tend to be in areas with high school graduation rates, high college attendance rates, low rates of idleness, low crime rates, low teen parenthood rates, and high rates of healthiness. These areas pay the most, have students who can focus on learning and provide inviting communities for teachers to live. But these areas are also achieving at near maximum levels, there is very little room to improve outcomes when nearly everyone graduates, goes to college and is healthy. These locales would offer no opportunity for a teacher to

enjoy substantial rewards for their contributions. In overcoming the incentives areas with the least amount of need offer, the government can provide ambitious teachers considerable incentives for taking on schools with the greatest ability to grow in success. Schools with the biggest amount of need should attract teachers who feel, or have proven, that they have the most to give. If incentives are correctly structured in direct relation to income, the market shall shift fiscally so the lower a schools' outcomes, the greater opportunity a teacher has to be monetarily successful. In that, government actions directly reflect how it should be: the greater the societal success of a teacher's students, the better a government meaningfully acknowledges it.

In addition to pushing teachers to the schools who need help the most, these incentives also push teachers to self-sort in selecting schools where they think their impact will be greatest. Many teachers seek out schools based on pay, attractiveness of location, or ease of teaching, but there does not seem to be much incentive for teachers to seek out communities which they have extensive experience in or a great belief in their ability to foster its success. Familiarity with a demographic or community means teachers have a better idea how to relate with students, and how to improve aspects of their lives at school and outside of it. Governments want to avoid a local "brain drain," and encourage students who were able to navigate and succeed in their community to bring back what they learned. Children should not be simply left to subpar schooling just because they happened to be born in a high-need community. The government must look to support the children of these communities, giving them effective tools for upliftment especially when the community does not already supply them. Anything less would be to give up on these children, and the future of these communities.

An outcomes based system also gives teachers heavy incentive to be leaders in their community, and care about a community's success. Students are only in school for less than half of every day, and are typically not in school at all during weekends or the summer. If teachers can improve the environment a student finds themselves in outside of school, the chances of a successful student outcome are that much higher. The goal is to "shift a school culture that keeps parents and communities at arm's length to one of school community collaboration. There is a growing recognition that in order to have successful schools… we also need to build greater capacity in communities—however this is defined—so that children come to school ready to learn" explains Horsford and her colleagues (p. 237). An outcome based incentivization pushes teachers to think creatively in how they can improve a student's circumstances outside of school, should that be being more involved with parents, or using the resources of the school as a whole to foster positive aspects of community. Horford and colleagues in their research have seen "a long history of conflict between schools and communities—especially low-income communities that neither spreadsheets nor [MCL]s have effectively addressed" (p. 240). Rewarding successful outcomes would not only pressure schools to engage with their communities, but see their improvement as a powerful way to improve a school's own success.

That means rewarding teachers who are good role models, and who take an interest in their student's success even outside the classroom; those who find ways to increase the chances of a positive student outcome beyond just teaching academics. Much of David Shipler's book *The Working Poor* illustrates how many Americans lack the necessary life skills to succeed in common society, "the soft skills should have been

taught in the family, but in many cases, the family has forfeited that role to the school. In turn, the school has forfeited the role to the employer. The employer simply does not know what to do" (p. 126). When families cannot be relied upon to prepare their children for success, schools need to find ways to step in, otherwise governments pay for it later as students find themselves without the skills to survive independent of government assistance (Shipler, 2008, p. 126). Teachers need to know not only that they can take on that role, but that they should. If the goal is clearly demonstrated to be successful outcomes, and governments acknowledge that in how they reward effective teaching, then teachers will make it a priority to prepare their students for sustained success.

The rewards being based on long-term outcomes incentivizes teachers to take a long-term interest in their students, in their role in the school, and their role in the community. With incentives being based on a long-term outcome, teacher's success is based on the long-term development of their students. Long-term rewards encourage teachers to stay in a school or community to essentially protect their investment. Community remains key, and as Roza explains "understanding schools as embedded in community means that building professional capacity within schools also requires building community capacity and relationships beyond the school" (p. 214). Teachers will have a reason to follow-up and support their students as they grow, and do what they can to stay involved in the community and make an impact despite no longer teaching these students in the classroom. With rewards for their work being probably at least 5 to 10 years away, teachers are incentivized to work towards the kind of school and community initiatives that take years of planning and execution to succeed. Current education incentives are mostly year to year, so teachers are given little reason to make

long-term improvements. Being involved in the community, also leads teachers to be further in tune with their communities. Roza demonstrates centering curriculums "around culturally relevant learning" (p. 241) remains essential to making the most of a teacher's relationship with their students. For Roza, further community involvement leads teachers to realize "a form of student empowerment that does not rely on paternalistic, boot camp models that teach students obedience and provide a test-driven education" (p. 242). This encourages teachers to "develop critical consciousness and critical thinking to empower students by helping them develop positive identities leading to growing self-confidence and better academic results" (p. 241). Teachers cannot empower students in their communities, if they do not know what positive empowerment in the community looks like. Outcome based incentives would not only reward teachers for an enduring commitment to students and community, but give them the space of time to take in the community that surrounds them and see how they can use that community to aid their students.

Further success comes in forcing teachers to support outcomes as a unit: teachers depend on other teachers to provide a successful base to build upon, and build on their success in forming further structure. Again, this is the case in Finland shows Sahlberg, where "school improvement and professional development focus on enhancing personal work and organizational performance and they normally have strong emphasis on teamwork, collaboration with teachers and schools, and shared leadership. Enhancing social capital is as important as improving human capital in Finnish schools" (2015). Outcomes are dependent on how a student's entire K-12 academic career forms them; going beyond just how a single teacher teaches a student a single curriculum. In passing

off their students to other teachers, teachers are going to be incentivized to help these teachers with their new students. Teachers are dependent on each other for their own success, and with that are pushed to not only pull their own weight, but help other teachers when they can. That could mean educating them on particular student needs, or making sure what they took away from their classroom serves as a strong base for what they will learn in the following years.

It may also push teachers to become more willing to address and support the failures they see in other teachers. This proves another way to further accountability among teachers, while still allowing teachers a great deal of autonomy in their curriculum. Teachers are not judged by a test they have to teach to, but other colleagues whose success is their success. While it may seem that freeloading teachers may benefit from an outcomes system that rewards every teacher that had a student; an outcomes system actually helps remove a teachers' ability to get away with freeloading. When they fail to effectively teach their students they not only hurt their students, but other teachers. While students have little power in how they can hold a teacher accountable for their failures, teachers who inherit failed students will now have a reason to hold ineffective teachers to their failures.

It is important that outcomes enforce only incentives, and not punishments, in avoiding punishing effective teachers for being a part of a faulty system. The goal of the system is to reward everyone for figuring out how to increase successful outcomes as a whole. Teachers up to the task, maybe because of financial incentives or maybe because of other reasons, have found ways to work together in creating a success sustaining

environment. Getting all of these pieces to line up together is a daunting task, and it regularly will require the complete overhaul of entire systems of schooling. Too often, good teachers will find themselves brought down by an ineffective system, especially in schools where outcomes are generally subpar. Effective teachers should not be pushed to leave bad systems through outcome based repercussions, they should be incentivized to change those faulty systems.

Making Teaching Easier and More Effective Through Improved Preparation

Further relying on already effective teachers, in MCLs, is part of the solution. But, in truly solving the United States' education problems, it seems only logical that government would want to take steps to ensure all teachers are effective. Darling-Hammond feels strongly that this is the case:

> A key corollary to [my] analysis is that improved opportunities for minority students will rest, in large part, on policies that professionalize teaching by increasing the knowledge base for teaching and ensuring mastery of this knowledge by all teachers permitted to practice. This means providing all teachers with a stronger understanding of how children learn and develop, how a variety of curricular and instructional strategies can address their needs, and how changes in school and classroom practices can support their growth and achievement (2001).

Investing in preprofessional preparation opportunities for teachers, and increasing standards, will not only improve the level of teaching, but also advance professionalization of the industry, helping further lure some of the country's most ambitious and brightest into the teaching profession. With more certainty that every

teacher is a qualified one, teachers will be able to enjoy an alluring level of prestige, public confidence and autonomy.

Fixing the academic aspect of becoming a teacher begins in reevaluating the United States' approach to a teachers' qualifications; increasing the standards to further the respect and quality of the profession. Darling-Hammond feels as such, and lists two reasons for this approach:

> First, the professionalization of an occupation raises the floor below which no entrants will be admitted to practice. It eliminates practices that allow untrained entrants to practice disproportionately on underserved and poorly protected clients. Second, professionalization increases the overall knowledge base for the occupation, thus improving the quality of services for all clients, especially those most in need of high-quality teaching (Darling-Hammond 2001; Wise & Darling-Hammond, 1987; Darling-Hammond, 1990a).

If the quality of the average teacher is greatly improved, then the chances of a student being taught by a subpar teacher fall accordingly. Such improvements can be accomplished by raising the quality of the academic teaching programs being offered. According to Darling-Hammond, the research that has been done shows "in almost all states, teacher education is more poorly funded than other university departments" (Darling-Hammond, 2001; Ebmeier, Twombly, & Teeter, 1990). The department has long been used to subsidize other university offered programs that train engineers, accountants, lawyers, and doctors (Darling-Hammond, 2001). "Rather than bemoaning the quality of teacher training, policy makers should invest in its improvement, require schools of education to become accredited, and insist that teachers pass performance

examinations for licensing that demonstrate they can teach well" affirms Darling-Hammond (2001). States especially need to strengthen and improve teachers' preparation through improvement incentive grants to schools of education and supports for licensing reform (Darling-Hammond, 2001). These reforms not only raise the collective quality of teaching, but can help ensure teachers are prepared enough to endure the difficulties of teaching.

Pressuring states, the federal government should lead the way in providing an adequate supply of well-qualified teachers just as it has in providing an adequate supply of qualified physicians (Darling-Hammond, 2001). "When shortages of physicians were a major problem more than 30 years ago, Congress passed the 1963 Health Professions Education Assistance Act to support and improve the caliber of medical training, to create and strengthen teaching hospitals, to provide scholarships and loans to medical students, and to create incentives for physicians to train in shortage specialties and to locate in underserved areas" explains Darling-Hammond (2001). The act was specifically aimed at improving physician institutions; "the most extensive changes came in the area of institutional support to schools" confirms Michigan University School of Public Health Professor Owen MacBride. Congress appropriated a total of 175 million federal dollars for the act, equivalent to 1.5 billion dollars today (Public Law 88-128, 1963). With the debilitating shortage of qualified teachers at the present, a similar act targeted towards education seems more than necessary.

A great part of Finland's success can be owed to the strength of their teacher preparation investments and standards. Finnish education Professor Sari Muhonen describes the reality for a prospective Finnish teacher:

> For decades, Finnish teachers have been required to obtain a master's degree. Our teacher education is research-based, meaning the programs involve an integration of educational theories, research methodologies and practice – building an understanding of how teaching and learning are related to each other… One might expect Finland to suffer teacher shortages not unlike those seen in the U.S. But this is not the case. A major reason for this is that the teaching profession is seen as desirable. We are, again, trusted and appreciated. We have the freedom to choose among a wide range of high-quality learning materials, our salaries are competitive, and the work calendar is attractive. We are not subject to accountability systems based on student test scores but instead are encouraged to develop our work and collaborate with others.

High standards of teaching warrant a high level of trust, which goes far in making the teaching position a very attractive option for ambitious students. If governments want to ensure teachers are teaching high-quality curriculums, then that starts with sending them into the classroom with more than enough tools to do so. Teachers who are not cut out to teach, be that not being able to understand the curriculum or not being able to work with children, need to be filtered out before they become independent teachers. Effective teachers should not be bogged down by a system that limits their ability to teach, just to ensure other ineffective teachers do not completely misuse their time in the classroom.

But Finland benefits from a higher education system where a master's degree costs nearly nothing; an integral part of creating qualified teachers will require making competitive scholarships available, with focus on scholarships for bright prospective teachers who agree to teach in low demand fields and locations. If the requirements for

teaching are going to be increased, the costs of becoming a teacher will most likely increase as well. Governments need to make pursuing a master's degree in Education worthwhile. Part of that is raising teacher wages, but that also means making a master's degree in Education one of the cheapest degrees well qualified students can attain. If governments want to get the most impact from their scholarships, they should find ways to push the most qualified students to teach at the neediest schools. The largest scholarships need to be given for promising prospective teachers who agree to teach in high-poverty communities. Further incentive should be given to well qualified prospective teachers who come from high poverty communities, to go back to their communities. As noted earlier, familiarity with a community is an invaluable teaching asset. If these prospective teachers agree to return to where they grew up to teach, they deserve an increase in scholarship beyond just what they would get for teaching in a high-need school.

The best way governments can protect their investment, and properly prepare teachers, is by increasing the role of student teaching. The medical field requires doctors in training to get up to five year of hands on experience before they perform life altering work, the importance of teaching warrants similar standards. While five years may be excessive, requiring something like a one year student teaching position before becoming a teacher gives students a chance to see and interpret education from a new perspective before they are given full reign of a classroom. 30 percent of teachers leave the profession during the first five years, and many do so because they cannot handle learning to teach while given the responsibility of a classroom (Darling-Hammond, 2001). Former teachers say they would have appreciated that opportunity before they

took on their own classrooms, and some said they would have appreciated the rigor of a hands-on full-time classroom experience versus being taught how to teach in a university. This does not serve as a replacement for university teaching, but as a supplement just as a medical residency is to medical school.

Aiding the teacher they work under full-time, student teachers warrant a livable wage, and in that student teaching represents more than just another educational program prospective teachers have to pay for. Student teachers, being much cheaper than a full-time teacher, represent an affordable way to help ease the overwhelming burden many teachers face in a full classroom. Student teachers can help take on some of the work, and more low stakes student to teacher interactions, that teachers may feel overburdened with. MCLs may be able to employ student teachers as a switchable teachers aid, or student teachers might find themselves better served as the student to one experienced teacher. With that said, it seems like MCLs seem perfectly selected as trustworthy and experienced mentors for young inexperienced student teachers. In the help they can bring, the work they can take on, and the opportunity for paid hands on experience without the accountability, furthering the role of student teaching seems like an advantageous investment for all parties involved.

Schools and education programs could be made even stronger through the creation of strong and sustainable preparation pathways between universities and communities. First, the aim would be to implement the practice schools Muhonen explains are common in his home country: “in Finland, most of the teacher practice periods take place in practice schools — public schools that are connected to universities and their teacher education programs. Theory and practice are closely intertwined.

Teaching practice is conceptualized and deeply reflected upon. The aim is to educate competent, reflective teachers who develop their practice." Universities could ensure local schools a steady flow of community specialized teachers, in exchange for more research access. Studying local schools, local universities would have extensive knowledge of teaching in local communities and would be best equipped to prepare teachers for local schools. Beyond scholarships for teachers who taught where they grew up, governments could give scholarships to students at colleges who partnered with high-poverty communities, provided they stay after graduating to teach in those communities. But this partnership between schools and universities serves an even greater purpose. All the reforms proposed in this paper, especially the MCL role and an outcome based incentive system, were partly pushed to spur the autonomous development and employment of effective curriculums and methods. A greater connection between universities and schools makes it easier for academics to discover what works, and teach those effective methods to new generations of prospective teachers. It may turn out, in being implemented, what is proposed in this paper may not be as effective as previously thought; in that case, it is up to education academics to correct the mistakes of the past and steer prospective teachers towards more effective methods. Well tested improvements in education will not come without a steady rate of academic research, and that requires a fluid research exchange between schools and research universities.

IV. Addressing: Problems Early in Establishing a Solid Foundation through Early Intervention

Intervention before preschool is key to making every teachers job easier; it builds a strong foundation in both the student and the family that every teacher down the line

can build upon. Early intervention that involves the family addresses the effects of family dynamics in a way school never can. Head Start is a federally funded pre-Kindergarten intervention program, offering a range of services to disadvantaged children and parents, including: "educational, nutritional, health, social, and other services" (ECLKC, 2018). Head Start hopes to curb inequality by attempting to give young children, and their families, the tools families not in poverty typically have to build a strong educational base for their children. Beyond the robust base it builds for teachers to take advantage of, investing in Head Start just makes economic sense. A study by James Heckman, a Nobel Laureate in Economics at the University of Chicago, recommended to the National Commission on Fiscal Responsibility and Budget Reform, Head Start is a program "on which to build and improve—not to cut" (NHSA, 2010). Head Start generates a Return On Investment of $7 to $9 for every $1 invested (NHSA, 2010). At the very least, that is returns of 700%. Investing in early childhood education programs, such as Head Start, yields a higher rate of return to society than spending money on secondary education and job training programs (NHSA, 2010). Another study, by economist David Deming of Harvard, showed that Head Start is already efficient in its current form. Deming found Head Start generates about 80 percent of the benefits of more extensive and expensive preschool programs at about 60 percent of the cost. While the evidence is not definitive that Head Starts' early age test score improvements are sustained throughout a student's academic career, Deming does find substantial evidence of what is important: it considerably increases adult outcomes. Few programs, preschool or later on in a student's development, go farther in increasing a student's young adult outcomes according to Deming.

There is a reason, explains Georgia psychology professor David R. Schaffer, that it remains "perhaps the most enduring legacy of President Lyndon B. Johnson's War on Poverty in the United States." Yet, there seems to be no good reason why Project Head Start has not been expanded as part of requiring students be enrolled in a preschool program. Head Start is one of the few United States education initiatives that does not need to be reformed; it is working so well it needs to be expanded. Getting as many families as possible enrolled in Head Start, will be the final policy proposed in this paper, because it may be the one this country most needs. The United States cannot afford to make intervention before Kindergarten optional, and it makes too much sense to have Head Start be opt-out for a greater selection of families instead of opt-in for some.

In its current state, too few families take advantage of Head Start, and the country loses out as a result. Currently, all families with income below the poverty line are eligible for Head Start nationwide. Yet, Head Start programs served only 36 percent of eligible children who were 3 to 5 years old (NHSA, 2020). For a program so integral to reducing the burden on both the school system, and welfare systems, the lack of effort in enrolling eligible families only makes the government's job in the future much harder. If the mark of a 700% return on investment is correct, the United States is losing out on 122 billion dollars in returns on the 1.1 million eligible children not enrolled in the program (NHSA, 2018). That number is so great that the margin of error could be huge, many tens of billions of dollars, and investing in Head Start expansion would still make financial sense.

An expansion of Head Start to all eligible families would be expensive, but an ultimately affordable federal investment, at a cost increase of around 17.3 billion 2018

dollars. The more recent Head Start report puts fiscal year 2018's funding at just under 10 billion for 36 percent of eligible children enrolled (NHSA, 2020). Adjusting that to 100 percent enrollment puts the cost at 27.3 billion dollars. While that probably underestimates the cost of nearly tripling the enrollment, which includes finding more spaces to house programs and funds for increasing recruitment, the costs are comparable to the other ways the federal government currently tries to curb inequality. The federal government spent $597 billion on Medicaid, $19 billion on the Children's Health Insurance Program (Medicaid, 2020), $60 billion on Supplemental Security Income (CBPP, 2020), and $74.2 billion on the Supplemental Nutrition Assistance Program in 2020 (U.S. Department of Agriculture, 2020). In 2019, housing assistance cost the federal government $51 billion and Earned Income Tax Credit cost $70 billion for the year (PGPF, 2020). If Head Start so effectively eases the burden on these other programs, and uplifts individuals before they need upliftment, then the price of Head Start seems just as worthy of funding as all these other welfare programs. In addition, Head Start currently operates on only federal funding; with the United States' mostly state and local approach to funding education, it does not seem unprecedented to ask states and districts to take on some of the funding commitment.

To effectively take advantage of the programs benefits the federal government needs to make the program opt-out, an extension of how public school currently works. Children living in poverty attending Head Start must be treated as essential as children attending school. That means requiring families under the poverty line to enroll, the same way families are required to enroll their students in school, except families would not be punished for deciding to opt-out. The same commitments that exist in getting children to

attend public school would stand, but just expanded to Head Start as well for families below the poverty line. Families who upon being approached decide they do not want to enroll their children will simply stop being bothered to enroll, while families who decide to utilize it will be able to enjoy its benefits. This is all in an effort to enroll as many families as possible, without increasing the burden on families living under the poverty line by punishing them because they for whatever reason cannot enroll. The ability to opt-out will also hopefully address ethical concerns about requiring a program only for a certain subsect of people. An opt-out option means the program will probably never reach 100 percent enrollment, which will make budget allotment a little more difficult. Estimating 100 percent enrollment in making a budget will most likely lead to overbudgeting, but it may make sense then to budget for 100% and keep money that is not used to continue to improve the program every year. There are of course other ways to do it, but in the interest of simplicity and commitment to the program, this may be an ideal approach.

Conclusion

At the moment these remain proposals; it will take a great deal of educational activism to make them a reality. That can be done a number of ways, although the most successful approach to complete state reforms seems to have been through court. Wyoming, and now Vermont (Marar, 2020) and New York, were able to pass comprehensive equitable funding policies as a result of state supreme court mandates. While Wyoming's reforms have stood for decades despite the conservative sentiment of the state, Vermont and New York's reforms have just begun. Unfortunately, UK College of Law legal scholar Scott R. Bauries was unable to find a prevailing legal pattern for why some state educational adequacy cases have been successful and others have not. Educational activists might only know if they have a case, well after they have brought it to court. That seems to be the common approach: lawsuits of a similar objection to the ones in New York and Vermont have been filed in more than 40 states (Semuels, 2016).

Considering only three cases seem to have been successful to a degree, there may be more certainty in a political route. Many of the reforms advocated for in this paper resemble those proposed by Elizabeth Warren, and to a smaller degree Bernie Sanders, in their 2020 presidential campaigns. While neither was able to win the presidency, their relative degree of success in the election, and their position as senators, seems to reveal that their policies do have a sizeable level of mainstream appeal. While neither made education the forefront of their campaign, maybe papers like this one will encourage policy makers similar to Sanders and Warren to fully take on education reform. While education remains a hard issue to push because the payoffs to education policy will usually not be apparent for decades, developments in data-science have allowed policy

makers to be more and more certain about the impact of long-term policies. This paper reveals as the data becomes more precise, radical reforms only show themselves to be more viable. As mentioned in the introduction, not even Warren has ever had access to the exhaustive data on education that informed this paper's proposals. In for the first time having a better idea what they are spending money on, maybe politicians will realize what a roughly 125 billion dollar investment, spent with care, could really do to ensure this country's future. While the returns may be realized long after their political careers have ended, few investments will do more to save the country money, building a longstanding legacy. Maybe the Biden administration, in its recent unprecedented 2021 spending spree (White, 2021), will seize the moment to address education inequality like it so desperately deserves to be addressed.

In appealing to policy makers there is difficulty in trying to strike a balance between effectiveness and viability, and while the intention in writing this paper was to address education inequality, ideas were approached with greater concern for their viability than their ability to completely eliminate all aspects of education inequality. This is not a presentation of every single reform the United States needs to make to address inequality, but what this paper determines to be the necessary ones. These ideas should be judged in their ability to improve America far beyond its current state, while only minimally sacrificing what currently makes this country great. That is much more than being the richest country in the world. The United States' diversity of life is unlike any, and its wealth of culture and ideas keeps the United States at the forefront despite its failures. Yes, it is largely what makes constructing a perfectly equalized education system seemingly impossible; it will never have the uniform efficiency of education like a

Nordic country or an East-Asian country. But the United States education system should consider itself lucky to cater to so many different cultures, communities, and passions. The country must strive to give all these different mindsets a basic set of tools in which to achieve their potential; potential that the country will be there to relish in. Wasted potential seems the antithesis to the American dream, yet that appears to be the current chief export of its education system. To reform America's education system, is to restore the American dream. Only in that reformed system of education can America's children be all that they can be, so America can one day be all that it can be.

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